CONTROL DATA

60458190

CDC® CYBER 170 COMPUTER SYSTEMS MODELS 845 AND 855

CDC® CYBER 180 COMPUTER SYSTEMS MODELS 840, 845, 850, 855, AND 860

CDC® CYBER 840S, 845S, 855S, 840A, 850A, 860A, AND 870A COMPUTER SYSTEMS

CENTRAL PROCESSOR AND CENTRAL MEMORY

L4 DIAGRAMS

VOLUME 5

HARDWARE MAINTENANCE MANUAL

REVISION RECORD

REVISION	DESCRIPTION
A (09-03-82)	Manual released.
B (11-11-82)	Manual revised; includes Engineering Change Order 44068. Pages 2, 5/6, 1-4, 1-5, 1-6, 1-10, 1-16, 1-18, 1-19, 1-20 through 1-24, 1-26, 1-27, 1-29 through 1-31, 1-33, 1-41, 1-44 through 1-48, 1-55, 1-57, 1-66, 1-68, 1-77, 1-79, 1-88 through 1-90, 2-11, 2-22, 2-31, 2-32, 2-45, 3-15, 3-20, 3-25, 4-19, 4-38, 4-57, 4-75, 5-11, 5-13, 5-19 through 5-21, 5-23, 5-29, 5-30, 5-46, 5-54, and A-12 in volume 1; pages 2, 5/6, 6-66, 7-26, 7-28, 7-30, 7-31, 7-35, 7-39, 7-50, 7-61, 9-14, 9-17, 9-29, 9-38, 10-8, 10-10, 10-13, 10-59, 10-64, 10-66, 10-67, and A-12 in volume 2; and pages 2, 5/6, 11-93, 11-94, 11-130, 11-138, 11-140, 11-206, 13-22, 13-40, 13-47, 14-4, 14-7, 14-10, 14-11, 14-12, and A-12 in volume 3 are revised.
C (02-11-83)	Manual revised; includes Engineering Change Order/Field Change Order 44122. Pages 2, 3/4, 5/6, 1-15, 1-22, 1-28, 1-29, 2-33, 2-44, 4-58, 4-59, 4-61 through 4-64, 4-68 through 4-70, 4-72, and 4-75 in volume 1; pages 7-10, 7-16, 7-22, 7-24, 10-1 through 10-40, 10-43 through 10-53, 10-56, 10-58 through 10-61, 10-64 through 10-71, 10-73, 10-74, 10-76, 10-78, 10-83, 10-85, 10-89, 10-91, 10-93, 10-95, 10-97, 10-101, 10-102, 10-106, 10-113 through 10-125, 10-128, 10-130 through 10-133, 10-135, 10-136, 10-138, 10-140 through 10-142, 10-144 through 10-146, 10-148, 10-151, 10-152, 10-154, 10-156, and 10-157 in volume 2; pages 2, 3/4, 5/6, 11-7, 11-20, 11-22, 11-24, 11-25, 11-27, 11-30, 11-79, 11-92, 11-118, 11-121 through 11-123, 11-128, 11-129, 11-137, 11-152, 11-154, 11-159, 11-175, 13-2, 13-3, 13-10, 13-12, 13-16 through 13-19, 13-22, 13-25, 13-27, 13-29, 13-32, 13-34, 13-36, 13-39 through 13-41, 13-44, and 14-1 in volume 3 are revised.
D (06-13-83)	Manual revised; includes Engineering Change Order 44658. Pages 2, 1-20, 1-28, 1-40, 1-42, 1-56, 1-67, 1-71, 1-78, 1-89, 2-1 through 2-4, 2-6, 2-10 through 2-15, 2-22, 2-40, 3-3 through 3-5, 3-9, 3-12, 3-17, 3-18, 3-23, 3-27 through 3-29, 4-22, 4-68, 5-1 through 5-11, 5-13, 5-19, 5-21, 5-23, 5-29, 5-31, 5-33 through 5-35, 5-37, 5-38, 5-41, 5-42, 5-45, 5-50, 5-53, 5-57, and 5-59 in volume 1; pages 2, 7-10, 8-18, 10-2, 10-5, 10-9, 10-27, 10-35, 10-45, 10-56, 10-58, 10-62, 10-64 through 10-67, 10-70, 10-73, 10-81, 10-83, 10-136, 10-139, and 10-148 in volume 2; pages 2, 11-12, 11-19, 11-22, 11-30, 11-39, 11-89, 11-96, 11-97, 11-109, 11-117, 11-121, 11-126, 11-129, 11-131, 11-141, 11-165, 11-168, 11-179, 11-213, 11-218, 12-26, 13-32, 13-39, and 14-2 in volume 3 are revised.
E (09-07-83)	Manual revised; includes Engineering Change Order 44947. Pages 2 through 6, 2-15, 2-23, 2-35, 2-43, 2-46, and A-11 in volume 1; pages 2 through 6, 7-13, 8-2, 8-3, 8-6, 8-7, 8-15, 8-20, 8-24, 8-30, 8-31, 8-33, 8-34, 8-40, 8-49, 8-53, 8-54, 8-56, 8-57, 8-80, 8-86 through 8-89, 8-92 through 8-94, 8-97, 9-15, 9-27, 9-33, 10-6, 10-8, 10-9, 10-10, 10-12, 10-15, 10-39, 10-43, 10-58, 10-71, 10-121, and A-11 in volume 2; pages 2 through 6, 13-23, 13-24, 13-26, 13-28, 13-30, 13-31, 13-33, 13-35, 13-37, 13-38, and A-11 in volume 3 are revised.
F (01-10-84)	Manual revised; includes Engineering Change Order 45206. Front Cover through 8, 1-2, 1-15, 1-17, 1-18, 1-21, 1-58, 1-69, 1-80, 1-91, 4-59, 5-19, 5-29, A-1 through A-12, preceding divider, and following divider in volume 1; Front Cover through 8, 6-2 through 6-4, 6-6, 6-8, 6-9, 6-11 through 6-13, 6-16 through 6-18, 6-23, 6-25, 6-29, 6-33, 6-35 through 6-37, 6-40, 6-41, 6-43 through 6-51, 6-53 through 6-55, 7-6, 7-12, 7-13, 7-15, 7-23, 7-24, 7-26, 8-61, 8-63, 8-64, 9-2, 9-13, 10-4, 10-13, 10-15, 10-126, A-1 through A-12, preceding divider, and following divider in volume 2; Front Cover through 8, 11-4, 11-5, 11-12, 11-14, 11-19, 11-28, 11-127, 11-139, 11-189, 13-16, A-1 through A-12, preceding divider, and following divider in volume 3 are revised.

Publication No.
60458190

REVISION LETTERS I, O, Q, S, X AND Z ARE NOT USED.

Address comments concerning this
manual to:

Control Data Corporation
Technology and Publications Division
4201 North Lexington Avenue
St. Paul, Minnesota 55126-6198

or use Comment Sheet in the back of
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REVISION RECORD

REVISION	DESCRIPTION
G (03-30-84)	Manual revised; includes Engineering Change Order 45204. Front Cover through 8, 1-17, 1-18, 1-33, 1-38, 1-41, 1-54, 1-57, 1-65, 1-68, 1-76, 1-79, 1-87, 1-90, 2-17, 2-29, 2-35, 2-47, 3-4, 3-12, 3-29, 4-30, 4-58, 4-61, 4-63, 4-65, 4-67, 4-69, 4-70, 4-73, 4-74, 5-2, 5-10, 5-11, 5-19, 5-31, 5-60, A-1 through A-12, preceding divider, and following divider in volume 1; front cover through 8, 6-56, 6-59, 7-1 through 7-3, 7-5 through 7-15, 7-18, 7-19, 7-21 through 7-25, 7-27 through 7-29, 7-31, 7-34 through 7-37, 7-39 through 7-41, 7-43, 7-48, 7-49, 7-51, 7-52, 7-54, 7-55, 7-59, 7-60, 8-39, 8-65, 8-81, 9-1, 9-5 through 9-7, 9-12, 10-24, 10-73, 10-125, 10-145, 10-148, A-1 through A-12, preceding divider, and following divider in volume 2; front cover through 8, 11-4, 11-5, 11-7, 11-14, 11-17, 11-18, 11-33, 11-129, 11-133, 11-152, 11-156, 12-17, 13-1, 13-12, 13-22, 13-31, 13-32, 13-34, 13-36, 13-42, 13-45, 13-46, 14-8, A-1 through A-12, preceding divider, and following divider in volume 3 are revised.
H (03-30-84)	Manual revised; includes Field Change Order 45200. Pages 2, 3/4, 12-9, 12-24, and 12-27 in volume 3 are revised.
J (04-08-85)	Manual revised; includes Engineering Change Order 45784. Front cover through 8, 1-3, 1-9, 1-49, 2-1 through 2-4, 2-9, 2-12 through 2-15, tab preceding 3-1, 3-1 through 3-12, 3-14 through 3-29, 5-19, 5-31 through 5-34, 5-36, 5-39, 5-42, 5-43, 5-47, 5-50, 5-51, divider preceding A-1, A-1 through A-12, divider preceding A-13, and A-13 in volume 1; front cover through 8, 7-24, 8-7 through 8-28, 8-41 through 8-54, 8-92, 8-93 through 8-105, 9-21, 9-33, divider preceding A-1, A-1 through A-12, divider preceding A-13, and A-13 in volume 2; volume 3 now contains section 10, previously contained in volume 2 and section 11. All of volume 3 is completely revised. Page A-15 in volume 1; and 8-19.1 through 8-19.13, 8-28.1 through 8-28.9, 8-54.1 through 8-54.14, and A-15 in volume 2 are added. Volume 4 is added. It contains sections 12, 13, and 14, previously contained in volume 3. Sections 12 and 14 are completely revised. Section 13 is unchanged. This volume also contains new sections 15 and 16. Volume 5 contains all new material.
K (10-15-85)	Manual revised; includes Engineering Change Order 46998. Tab preceding 1-1, 1-2, 1-16 through 1-18, 1-23, 1-25, 1-26, 1-33, 1-46, 1-78, 1-89, tab preceding 2-1, 2-6, 2-10, 2-27, 2-28, 2-30, tab preceding 3-1, tab preceding 4-1, 4-52, 4-66, 4-70, tab preceding 5-1, 5-29, tab preceding india divider, A-5, and A-8 in volume 1; tab preceding 6-1, 6-27, 6-28, tab preceding 7-1, 7-12, 7-14, 7-18, 7-21, 7-25, tab preceding 8-1, 8-3, 8-19.1 through 8-19.13, 8-28.1 through 8-28.9, 8-31, 8-55, tab preceding 9-1, tab preceding india divider, A-5, and A-8 in volume 2; 10-5, 10-6, 10-15, 10-85, 10-125, 10-128, 10-138, 11-7, 11-8, 11-14, A-5, and A-8 in volume 3; 15-16 through 15-25, 16-5, 16-6, 16-15, 16-85, 16-123, 16-126, 16-138, 16-144, 16-157, A-5, and A-8 in volume 4; 17-7, 17-8, 17-14, 17-175, 17-176, 17-179, 17-218, 17-219, 18-61, A-5, and A-8 in volume 5 are revised.
L (06-20-86)	Manual revised; includes Engineering Change Order 47774. Front cover through 9, 1-1 through 1-3, 2-5 through 2-11, 2-13, 2-14, 2-16 through 2-20, 2-22 through 2-24, 2-27, 2-30, 2-31, 2-41, 2-42, 5-5, 5-32, 5-34, 5-38, 5-53, dividers preceding A-1 and A-15, and A-1 through A-13 in volume 1; front cover through 9, 7-1, 7-4, 7-12, 7-14, 7-15, 7-20, 7-21, 7-24, 7-27, 7-28, 7-48, 7-59, 8-15, 8-18, 8-19.2 through 8-19.6, 8-19.8, 8-19.10, 8-19.11, 8-19.12, 8-28.1 through 8-28.3, 8-28.5 through 8-28.8, 8-54.2, 8-54.3, 8-54.5, 8-54.7, 8-54.9, 8-54.11, 8-54.12, 8-96, 8-103, 9-15, 9-21, 9-27, 9-33, dividers preceding A-1 and A-15, and A-1 through A-13 in volume 2; front cover through 9, 10-12, 10-15, 10-16, 10-43, 10-54, 10-117 through 10-134, dividers preceding A-1 and A-15, and A-1 through A-13 in volume 3; front cover through 9, 16-5, 16-6, 16-12, 16-16, 16-43, 16-52, 16-54, dividers preceding A-1 and A-15, and A-1 through A-13 in volume 4; front cover through 9, 17-1, 17-29, 17-121, 17-131, 17-138, 17-139, 17-156, dividers preceding A-1 and A-15, and A-1 through A-13 in volume 5 are revised. Pages 2-11.1 through 2-11.11 and 2-22.1 through 2-22.11 are added to volume 1; pages 10-134.1 through 10-134.18 are added to volume 3.
M (02-16-87)	Manual revised; includes Engineering Change Order 48437. Front cover through 8, 1-1, 1-2, 1-3, 1-13, 1-15, 1-25, 1-29, 1-35, 1-46, 1-47, 1-51, 1-62, 1-73, 1-84, 3-28, 5-31, 5-32, A-1, A-4, A-5, and A-8 in volume 1; front cover through 8, 8-30, 8-31, 8-32, A-1, A-4, A-5, and A-8 in volume 2; front cover through 8, 10-97, 10-106, 10-136, 11-1, 11-121, 11-122, 11-123, 11-131, 11-133, 11-134, 11-156, A-1, A-4, A-5, and A-8 in volume 3; front cover through 8, 15-28, 16-97, 16-106, 16-136, A-1, A-4, A-5, and A-8 in volume 4; front cover through 8, 17-1, 17-121, 17-122, 17-123, 17-131, 17-133, 17-134, 17-156, A-1, A-4, A-5, and A-8 in volume 5 are revised. Pages 1-33.1 through 1-33.17 and A-4.1/A-4.2 are added to volume 1; pages 8-30.1 through 8-30.6, 8-33/8-34, and A-4.1/A-4.2 are added to volume 2; pages 10-116.1 through 10-116.13 and A-4.1/A-4.2 are added to volume 3; pages 8-33 and 8-34 are deleted from volume 3; pages 16-116.1 through 16-116.13 and A-4.1/A-4.2 are added to volume 4; page A-4.1/A-4.2 is added to volume 5.

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REVISION RECORD

REVISION	DESCRIPTION
N (05-01-87)	Manual revised; includes Engineering Change Order 48734. Pages 2, 3, 6, 1-18, and 1-34 in volume 1; 2, 3, 6, 8-17, and 8-19.11 in volume 2; 2, 3, 6, and 10-134.6 through 10-134.18 in volume 3; 2, 3, 6, and 16-122 in volume 4; 2, 3, 6, 17-122, 18-18, 18-30, and 19-8 through 19-13 in volume 5 are revised. Page 2.1/2.2 is added to all volumes. Pages 1-33.1 through 1-33.17 are deleted from volume 1. Pages 1-34.1 through 1-34.17 are added to volume 1 and page 16-122.1/16-122.2 is added to volume 4.

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REVISION RECORD

REVISION	DESCRIPTION

Publication No.
60458190

MANUAL TO EQUIPMENT LEVEL CORRELATION SHEET

This manual reflects the equipment configurations listed below.

EXPLANATION: Locate the equipment type and series number, as shown on the equipment FCO log, in the list below. Immediately to the right of the series number is an FCO number. If that number and all of the numbers underneath it match all of the numbers on the equipment FCO log, then this manual accurately reflects the equipment.

EQUIPMENT TYPE	SERIES	WITH FCOs	COMMENTS
AD112	A01	-	Released.
	A02	44015	
	A03	44122	
	A04	44123	
	A05	44465	
	A06	44479	
	A07	44645	
	A08	44798	
	A09	44663	
	A10	44806	
	A11	44180	
	A12	44872	
	A13	44916	
	A14	44921	
	A15	44940	
	A16	45127	
	A17	44805	
	A18	45257	
	A19	45288	
	A20	45142	
	A21	45238	
	A22	45344	
	A23	45797	
	A24	45793	
	A25	46398	
	A26	45341	
	A27	46492	
	A28	46681	
	A29	EC046082	
	A30	46807	
	A31	46938	
	A32	47130	
	A33	EC046115	
	A34	46111	
	A35	47415	
	A36	47367	
	A37	47668	
	A38	47865	
	A39	EC048443	
	B01	-	
	B02	44805	
	B03	45257	
	B04	45288	
	B05	45142	
	B06	EC045784	
	B07	EC045793	
	B08	45341	
	B09	46681	
	B10	46938	
	B11	47130	
	B12	EC046115	
	B13	46111	
	B14	47415	
	B15	47668	
	C01	-	Released.
	C02	46938	
	C03	47130	
	C04	47415	
	C05	47668	
	C06	47332	
AD112	S01	-	Released.
AD113	A01	-	Released.
	A02	46938	
	A03	47130	
	A04	47576	
	A05	47415	
	A06	47668	
AT464	A01	-	Released.
	A02	45345	
	A03	45798	
	A04	46397	
	A05	46491	
	A06	EC046082	
	A07	46806	
	A08	47366	
	A09	47860	
	A10	EC048442	
AT465	A01	-	Released.
	A02	45127	
	A03	45344	
	A04	45797	
	A05	4639[illegible]	
	A06	46492	
	A07	EC046082	
	A08	46807	
	A09	47367	
	A10	47865	
	A11	EC048443	
AT487	A01	-	Released.
	A02	46806	
	A03	47366	
	A04	EC047706	
	A05	47860	
	A06	EC048442	
	B01	-	Released.
	B02	46807	
	B03	47367	
	B04	EC047707	
	B05	47865	
	B06	EC048443	
AT487	C01	-	Released.
	C02	46805	
	C03	47365	
	C04	EC047705	
	C05	47861	
	C06	EC048441	

EQUIPMENT TYPE	SERIES	WITH FCOs	COMMENTS
AT494	A01	-	Released.
AT494	B01	-	Released.
AT494	C01	-	Released.
BS137	A01	-	Released.
	A02	EC041789	
	A03	42783	
	A04	43538	
	A05	44583	
	A06	45200	
	A07	44805	
	A08	44680	
	A09	48015	
BS145	A01	-	Released.
	A02	39845	
BS149	A01	-	Released.
	A02	39845	
BS213	A01	-	Released.
	A02	47021	
BS214	A01	-	Released.
BS215	A01	-	Released.
BT316	A01	-	Released.
	B01	-	Released.
GK210	A01	-	Released.

EQUIPMENT TYPE	SERIES	WITH FCOs	COMMENTS

PREFACE

This manual is for use in training personnel to understand the equipment and for use by qualified Engineering Services personnel in maintaining and repairing it.

The manual contains the level 4 (L4) logic diagrams for the CONTROL DATA® CYBER 170 Models 845 and 855, the CYBER 180 Models 840, 845, 850, 855, and 860, and the CYBER 840S, 845S, 855S, 840A, 850A, 860A, and 870A equipment:

AD112-A Central Processor (CP)/Central Memory Control (CMC)

AD112-B Central Processor (CP)/Central Memory Control (CMC)

AD112-C Central Processor (CP)/Central Memory Control (CMC)

AD112-S Central Processor (CP)/Central Memory Control (CMC)

AD113-A Second Central Processor

AT464-A 845 Performance Option

AT465-A 855 Performance Option

AT487-A 850/850A Performance Option

AT487-B 860/860A Performance Option

AT487-C 840/840A Performance Option

AT494-A 845S Performance Option

AT494-B 855S Performance Option

AT494-C 840S Performance Option

BS137-A Central Storage Unit (Memory Cabinet)

BS145-A Memory Increment

BS149-A Memory Increment

BS213-A Central Storage Unit

BS214-A Memory Expansion, 2M Words

BS215-A Memory Increment, 4M Words

BT316-A Cache Memory Expansion

BT316-B Cache Memory Expansion

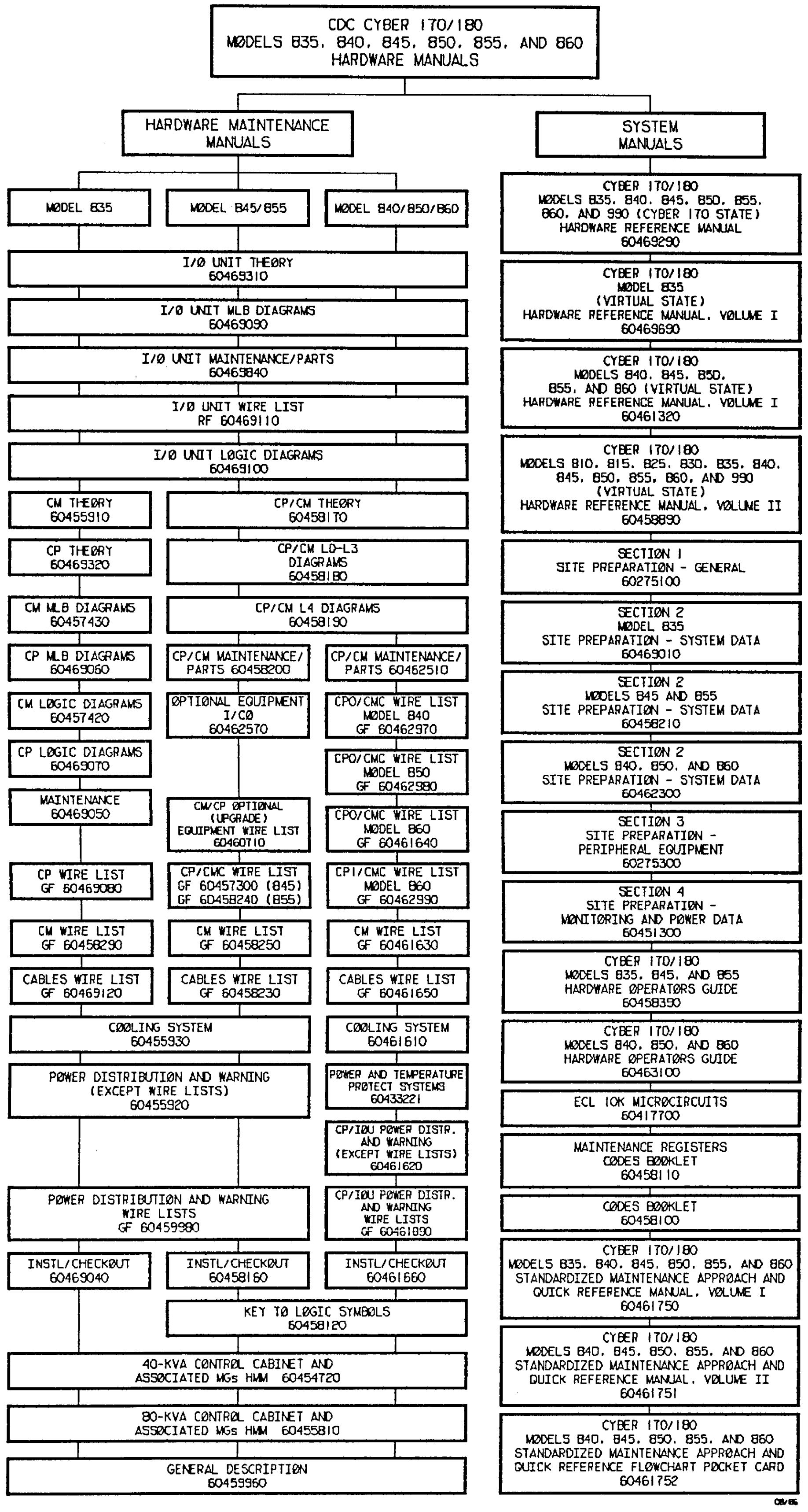
The level 4 logic diagrams in this manual are divided into groups that represent the functional areas (LM, CST, etc.) of the central computer. The functional areas have either one or two sets of diagrams. The two sets of diagrams apply to those functional areas where hardware differences exist between equipment. One of the two sets documents the AD112-A/B functional area and the other set documents the AD112-C, AD112-S, and AD113-A functional area. Refer to the appendix for definitions of the functional area abbreviations.

NOTE

This document does not contain the contractual performance restrictions for the AD112-S.

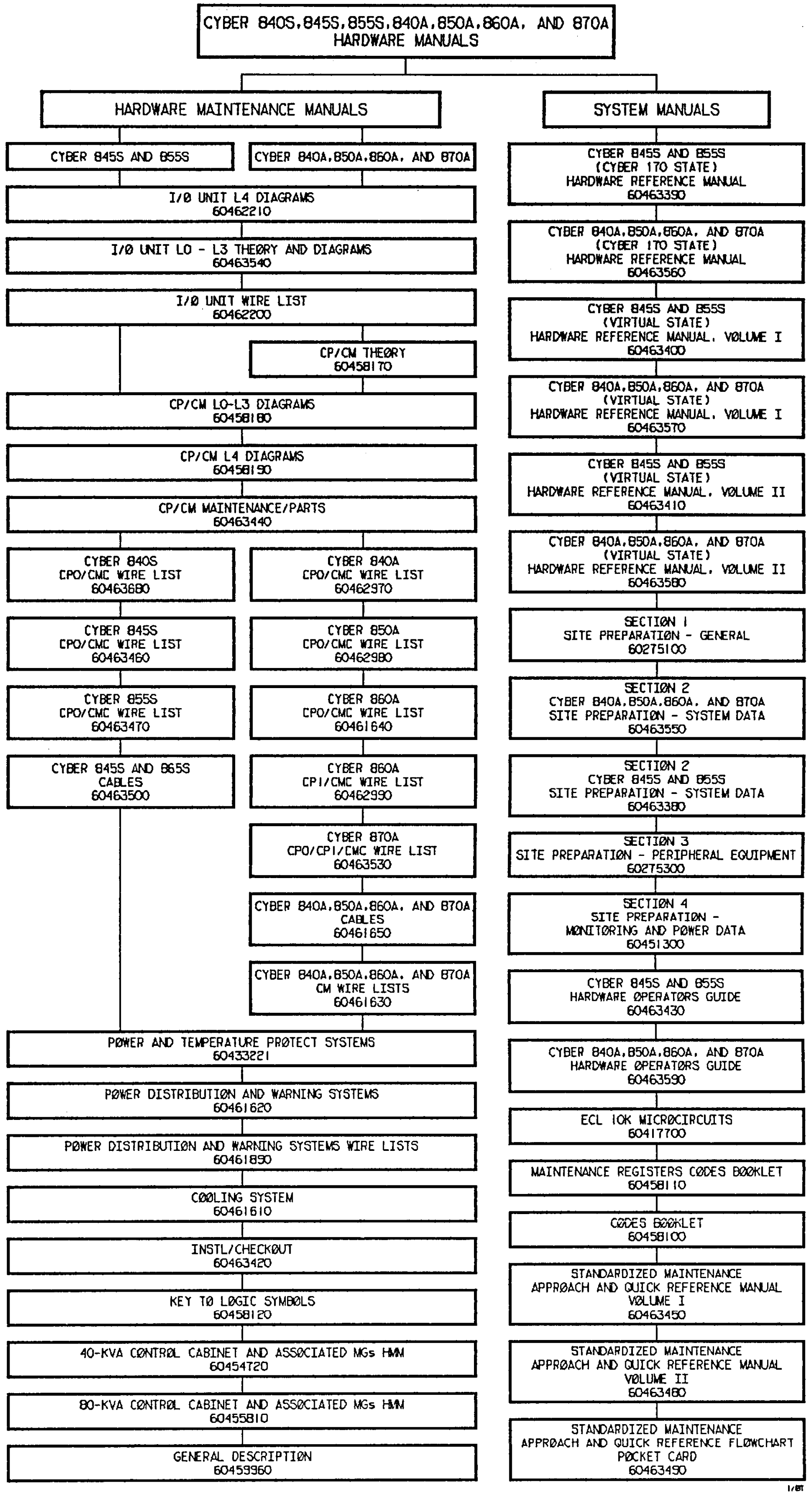
The System Publication Indexes on the following pages list other applicable manuals.

SYSTEM PUBLICATIØN INDEX


CDC CYBER 170/180 MØDELS 835, 840, 845, 850, 855, AND 860 HARDWARE MANUALS
HARDWARE MAINTENANCE MANUALS
SYSTEM MANUALS
MØDEL 835
MØDEL 845/855
MØDEL 840/850/860
I/Ø UNIT THEØRY 60469310
I/Ø UNIT MLB DIAGRAMS 60469090
I/Ø UNIT MAINTENANCE/PARTS 60469840
I/Ø UNIT WIRE LIST RF 60469110
I/Ø UNIT LØGIC DIAGRAMS 60469100
CM THEØRY 60455910
CP/CM THEØRY 60458170
CP THEØRY 60469320
CP/CM L0-L3 DIAGRAMS 60458180
CM MLB DIAGRAMS 60457430
CP/CM L4 DIAGRAMS 60458190
CP MLB DIAGRAMS 60469060
CP/CM MAINTENANCE/ PARTS 60458200
CP/CM MAINTENANCE/ PARTS 60462510
CM LØGIC DIAGRAMS 60457420
ØPTIØNAL EQUIPMENT I/CØ 60462570
CPO/CMC WIRE LIST MØDEL 840 GF 60462970
CP LØGIC DIAGRAMS 60469070
CPO/CMC WIRE LIST MØDEL 850 GF 60462980
MAINTENANCE 60469050
CM/CP ØPTIØNAL (UPGRADE) EQUIPMENT WIRE LIST 60460710
CPO/CMC WIRE LIST MØDEL 860 GF 60461640
CP WIRE LIST GF 60469080
CP/CMC WIRE LIST GF 60457300 (845) GF 60458240 (855)
CPI/CMC WIRE LIST MØDEL 860 GF 60462990
CM WIRE LIST GF 60458290
CM WIRE LIST GF 60458250
CM WIRE LIST GF 60461630
CABLES WIRE LIST GF 60469120
CABLES WIRE LIST GF 60458230
CABLES WIRE LIST GF 60461650
CØØLING SYSTEM 60455930
CØØLING SYSTEM 60461610
PØWER DISTRIBUTIØN AND WARNING (EXCEPT WIRE LISTS) 60455920
PØWER AND TEMPERATURE PRØTECT SYSTEMS 60433221
CP/IØU PØWER DISTR. AND WARNING (EXCEPT WIRE LISTS) 60461620
PØWER DISTRIBUTIØN AND WARNING WIRE LISTS GF 60459980
CP/IØU PØWER DISTR. AND WARNING WIRE LISTS GF 60461890
INSTL/CHECKØUT 60469040
INSTL/CHECKØUT 60458160
INSTL/CHECKØUT 60461660
KEY TØ LØGIC SYMBØLS 60458120
40-KVA CØNTRØL CABINET AND ASSØCIATED MGs HMM 60454720
80-KVA CØNTRØL CABINET AND ASSØCIATED MGs HMM 60455810
GENERAL DESCRIPTIØN 60459960
CYBER 170/180 MØDELS 835, 840, 845, 850, 855, 860, AND 990 (CYBER 170 STATE) HARDWARE REFERENCE MANUAL 60469290
CYBER 170/180 MØDEL 835 (VIRTUAL STATE) HARDWARE REFERENCE MANUAL, VØLUME I 60469690
CYBER 170/180 MØDELS 840, 845, 850, 855, AND 860 (VIRTUAL STATE) HARDWARE REFERENCE MANUAL, VØLUME I 60461320
CYBER 170/180 MØDELS 810, 815, 825, 830, 835, 840, 845, 850, 855, 860, AND 990 (VIRTUAL STATE) HARDWARE REFERENCE MANUAL, VØLUME II 60458890
SECTIØN 1 SITE PREPARATIØN - GENERAL 60275100
SECTIØN 2 MØDEL 835 SITE PREPARATIØN - SYSTEM DATA 60469010
SECTIØN 2 MØDELS 845 AND 855 SITE PREPARATIØN - SYSTEM DATA 60458210
SECTIØN 2 MØDELS 840, 850, AND 860 SITE PREPARATIØN - SYSTEM DATA 60462300
SECTIØN 3 SITE PREPARATIØN - PERIPHERAL EQUIPMENT 60275300
SECTIØN 4 SITE PREPARATIØN - MØNITØRING AND PØWER DATA 60451300
CYBER 170/180 MØDELS 835, 845, AND 855 HARDWARE ØPERATØRS GUIDE 60458350
CYBER 170/180 MØDELS 840, 850, AND 860 HARDWARE ØPERATØRS GUIDE 60463100
ECL 10K MICRØCIRCUITS 60417700
MAINTENANCE REGISTERS CØDES BØØKLET 60458110
CØDES BØØKLET 60458100
CYBER 170/180 MØDELS 835, 840, 845, 850, 855, AND 860 STANDARDIZED MAINTENANCE APPRØACH AND QUICK REFERENCE MANUAL, VØLUME I 60461750
CYBER 170/180 MØDELS 840, 845, 850, 855, AND 860 STANDARDIZED MAINTENANCE APPRØACH AND QUICK REFERENCE MANUAL, VØLUME II 60461751
CYBER 170/180 MØDELS 840, 845, 850, 855, AND 860 STANDARDIZED MAINTENANCE APPRØACH AND QUICK REFERENCE FLØWCHART PØCKET CARD 60461752
08/86

SYSINDEX 855

SYSTEM PUBLICATIØN INDEX


CYBER 840S,845S,855S,840A,850A,860A, AND 870A HARDWARE MANUALS
HARDWARE MAINTENANCE MANUALS
SYSTEM MANUALS
CYBER 845S AND 855S
CYBER 840A,850A,860A, AND 870A
I/Ø UNIT L4 DIAGRAMS 60462210
I/Ø UNIT L0 - L3 THEØRY AND DIAGRAMS 60463540
I/Ø UNIT WIRE LIST 60462200
CP/CM THEØRY 60458170
CP/CM L0-L3 DIAGRAMS 60458180
CP/CM L4 DIAGRAMS 60458190
CP/CM MAINTENANCE/PARTS 60463440
CYBER 840S CPO/CMC WIRE LIST 60463680
CYBER 840A CPO/CMC WIRE LIST 60462970
CYBER 845S CPO/CMC WIRE LIST 60463460
CYBER 850A CPO/CMC WIRE LIST 60462980
CYBER 855S CPO/CMC WIRE LIST 60463470
CYBER 860A CPO/CMC WIRE LIST 60461640
CYBER 845S AND 865S CABLES 60463500
CYBER 860A CPI/CMC WIRE LIST 60462990
CYBER 870A CPO/CPI/CMC WIRE LIST 60463530
CYBER 840A,850A,860A, AND 870A CABLES 60461650
CYBER 840A,850A,860A, AND 870A CM WIRE LISTS 60461630
PØWER AND TEMPERATURE PRØTECT SYSTEMS 60433221
PØWER DISTRIBUTIØN AND WARNING SYSTEMS 60461620
PØWER DISTRIBUTIØN AND WARNING SYSTEMS WIRE LISTS 60461890
CØØLING SYSTEM 60461610
INSTL/CHECKØUT 60463420
KEY TØ LØGIC SYMBØLS 60458120
40-KVA CØNTRØL CABINET AND ASSØCIATED MGs HMM 60454720
80-KVA CØNTRØL CABINET AND ASSØCIATED MGs HMM 60455810
GENERAL DESCRIPTIØN 60459960
CYBER 845S AND 855S (CYBER 170 STATE) HARDWARE REFERENCE MANUAL 60463390
CYBER 840A,850A,860A, AND 870A (CYBER 170 STATE) HARDWARE REFERENCE MANUAL 60463560
CYBER 845S AND 855S (VIRTUAL STATE) HARDWARE REFERENCE MANUAL, VØLUME I 60463400
CYBER 840A,850A,860A, AND 870A (VIRTUAL STATE) HARDWARE REFERENCE MANUAL, VØLUME I 60463570
CYBER 845S AND 855S (VIRTUAL STATE) HARDWARE REFERENCE MANUAL, VØLUME II 60463410
CYBER 840A,850A,860A, AND 870A (VIRTUAL STATE) HARDWARE REFERENCE MANUAL, VØLUME II 60463580
SECTIØN 1 SITE PREPARATIØN - GENERAL 60275100
SECTIØN 2 CYBER 840A,850A,860A, AND 870A SITE PREPARATIØN - SYSTEM DATA 60463550
SECTIØN 2 CYBER 845S AND 855S SITE PREPARATIØN - SYSTEM DATA 60463380
SECTIØN 3 SITE PREPARATIØN - PERIPHERAL EQUIPMENT 60275300
SECTIØN 4 SITE PREPARATIØN - MØNITØRING AND PØWER DATA 60451300
CYBER 845S AND 855S HARDWARE ØPERATØRS GUIDE 60463430
CYBER 840A,850A,860A, AND 870A HARDWARE ØPERATØRS GUIDE 60463590
ECL 10K MICRØCIRCUITS 60417700
MAINTENANCE REGISTERS CØDES BØØKLET 60458110
CØDES BØØKLET 60458100
STANDARDIZED MAINTENANCE APPRØACH AND QUICK REFERENCE MANUAL VØLUME I 60463450
STANDARDIZED MAINTENANCE APPRØACH AND QUICK REFERENCE MANUAL VØLUME II 60463480
STANDARDIZED MAINTENANCE APPRØACH AND QUICK REFERENCE FLØWCHART PØCKET CARD 60463490
1/87

SYSINDEX 855 3

CONTENTS

VOLUME 1

1. MAC 1-1
2. IF 2-1
3. CST (AD112-A/B) 3-1
4. ICP 4-1
5. OPI 5-1

APPENDIX

A. CHASSIS MAPS AND ABBREVIATIONS A-1

CP and CM Chassis Maps A-1
CP and CM Standard Abbreviations A-15

FIGURES

A-1-1 CP Chassis Map A-1
A-1-2 CP Panel A1 (CMC1) A-2
A-1-3 CP Panel A2 (AC2) A-3
A-1-4 CP Panel A3 (BDP) (With 121HD Arrays) A-4
A-1-4.1 CP Panel A3 (BDP) (With 12CV Arrays) A-4.1
A-1-5 CP Panel B1 (LM) A-5
A-1-6 CP Panel B2 (IU1) A-6
A-1-7 CP Panel B3 (IU3) A-7
A-1-8 CP Panel C1 (CMC2) A-8
A-1-9 CP Panel C2 (IU2) A-9
A-1-10 CP Panel C3 (ALN1) A-10
A-1-11 CP Panel D3 (ALN2) A-11
A-2-1 CM (BS137-A) Chassis Map (Models 845 and 855 only) A-12
A-2-2 CM (BS213-A) Chassis Map A-13

VOLUME 2

6. ALN 6-1
7. AC 7-1
8. BDP 8-1
9. SM 9-1

APPENDIX

A. CHASSIS MAPS AND ABBREVIATIONS A-1

CP and CM Chassis Maps A-1
CP and CM Standard Abbreviations A-15

FIGURES

A-1-1 CP Chassis Map A-1
A-1-2 CP Panel A1 (CMC1) A-2
A-1-3 CP Panel A2 (AC2) A-3
A-1-4 CP Panel A3 (BDP) (With 121HD Arrays) A-4
A-1-4.1 CP Panel A3 (BDP) (With 12CV Arrays) A-4.1
A-1-5 CP Panel B1 (LM) A-5
A-1-6 CP Panel B2 (IU1) A-6
A-1-7 CP Panel B3 (IU3) A-7
A-1-8 CP Panel C1 (CMC2) A-8
A-1-9 CP Panel C2 (IU2) A-9
A-1-10 CP Panel C3 (ALN1) A-10
A-1-11 CP Panel D3 (ALN2) A-11
A-2-1 CM (BS137-A) Chassis Map (Models 845 and 855 only) A-12
A-2-2 CM (BS213-A) Chassis Map A-13

VOLUME 3

10. LM (AD112-A/B) 10-1
11. CMC (AD112-A/B) 11-1

APPENDIX

A. CHASSIS MAPS AND ABBREVIATIONS A-1

CP and CM Chassis Maps A-1
CP and CM Standard Abbreviations A-15

FIGURES

A-1-1 CP Chassis Map A-1
A-1-2 CP Panel A1 (CMC1) A-2
A-1-3 CP Panel A2 (AC2) A-3
A-1-4 CP Panel A3 (BDP) (With 121HD Arrays) A-4
A-1-4.1 CP Panel A3 (BDP) (With 12CV Arrays) A-4.1
A-1-5 CP Panel B1 (LM) A-5
A-1-6 CP Panel B2 (IU1) A-6
A-1-7 CP Panel B3 (IU3) A-7
A-1-8 CP Panel C1 (CMC2) A-8
A-1-9 CP Panel C2 (IU2) A-9
A-1-10 CP Panel C3 (ALN1) A-10
A-1-11 CP Panel D3 (ALN2) A-11
A-2-1 CM (BS137-A) Chassis Map (Models 845 and 855 only) A-12
A-2-2 CM (BS213-A) Chassis Map A-13

VOLUME 4

12. CM (AD112-A/B) 12-1

13. ICC 13-1

14. CLK (AD112-A/B) 14-1

15. CST (AD112-C) 15-1

16. LM (AD112-C) 16-1

APPENDIX

A. CHASSIS MAPS AND ABBREVIATIONS A-1

CP and CM Chassis Maps A-1
CP and CM Standard Abbreviations A-15

FIGURES

A-1-1 CP Chassis Map A-1
A-1-2 CP Panel A1 (CMC1) A-2
A-1-3 CP Panel A2 (AC2) A-3
A-1-4 CP Panel A3 (BDP) (With 121HD Arrays) A-4
A-1-4.1 CP Panel A3 (BDP) (With 12CV Arrays) A-4.1
A-1-5 CP Panel B1 (LM) A-5
A-1-6 CP Panel B2 (IU1) A-6
A-1-7 CP Panel B3 (IU3) A-7
A-1-8 CP Panel C1 (CMC2) A-8
A-1-9 CP Panel C2 (IU2) A-9
A-1-10 CP Panel C3 (ALN1) A-10
A-1-11 CP Panel D3 (ALN2) A-11
A-2-1 CM (BS137-A) Chassis Map (Models 845 and 855 only) A-12
A-2-2 CM (BS213-A) Chassis Map A-13

VOLUME 5

17. CMC (AD112-C) 17-1

18. CM (AD112-C) 18-1

19. CLK (AD112-C) 19-1

APPENDIX

A. CHASSIS MAPS AND ABBREVIATIONS A-1

CP and CM Chassis Maps A-1
CP and CM Standard Abbreviations A-15

FIGURES

A-1-1 CP Chassis Map A-1
A-1-2 CP Panel A1 (CMC1) A-2
A-1-3 CP Panel A2 (AC2) A-3
A-1-4 CP Panel A3 (BDP) (With 121HD Arrays) A-4
A-1-4.1 CP Panel A3 (BDP) (With 12CV Arrays) A-4.1
A-1-5 CP Panel B1 (LM) A-5
A-1-6 CP Panel B2 (IU1) A-6
A-1-7 CP Panel B3 (IU3) A-7
A-1-8 CP Panel C1 (CMC2) A-8
A-1-9 CP Panel C2 (IU2) A-9
A-1-10 CP Panel C3 (ALN1) A-10
A-1-11 CP Panel D3 (ALN2) A-11
A-2-1 CM (BS137-A) Chassis Map (Models 845 and 855 only) A-12
A-2-2 CM (BS213-A) Chassis Map A-13

KEY TO LOGIC SYMBOLS

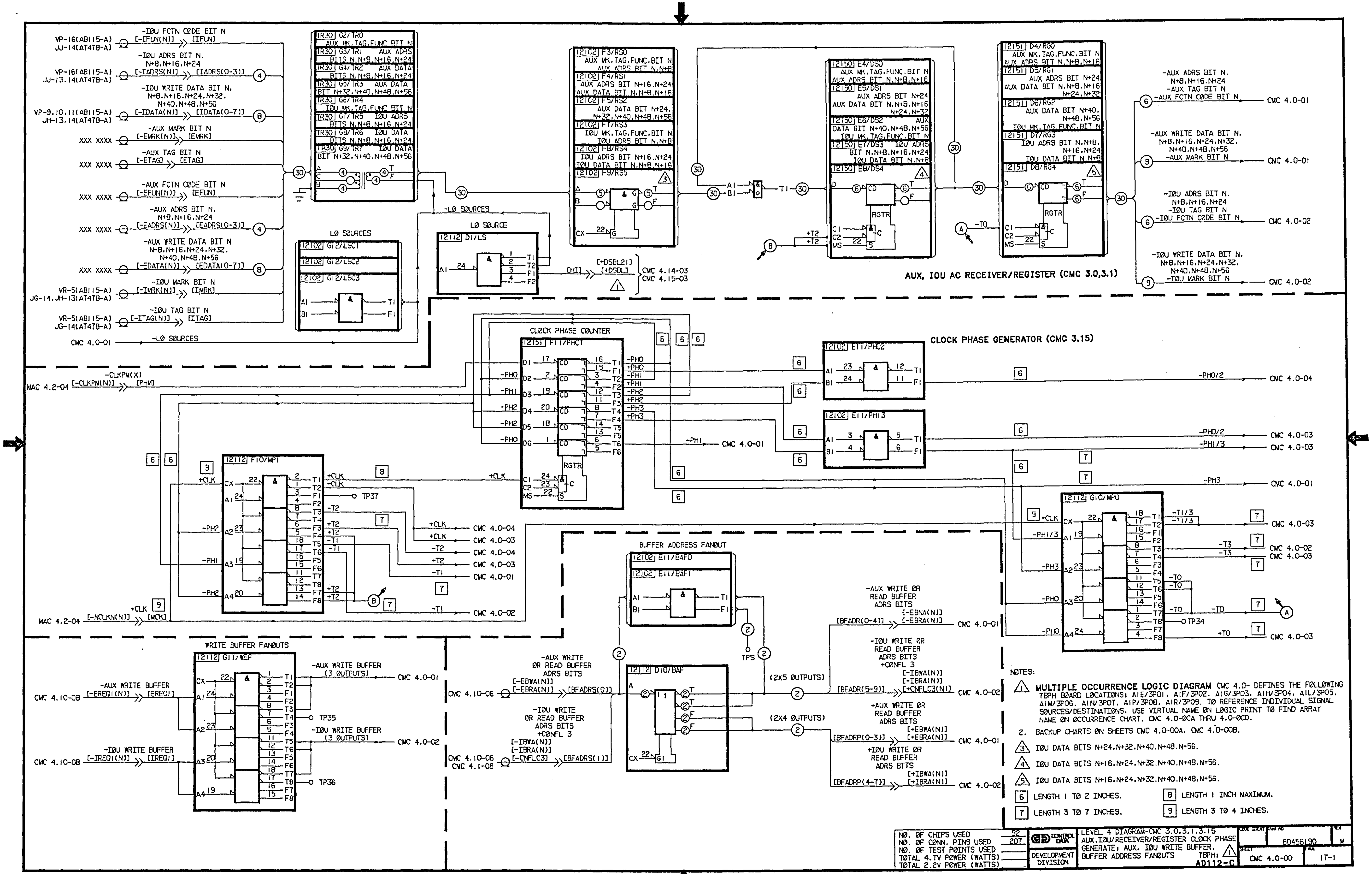
The level 4 diagram symbols follow those described in the CDC Key to Logic Symbols Manual and the ECL 10,000 Series Microcircuits Manual listed in the System Publications Index.

MULTILEVEL DIAGRAMS

The multilevel diagrams are arranged into five levels to guide the trainee or maintenance person from a simplified view of the system (level 0) to a detailed depiction of the logic (level 4) in a given functional area. The level 0 (L0) diagram shows the major components of all functional areas in the system and major signal paths between them. A level 1 (L1) diagram shows the basic relationship among the various logical components (registers, adders, and so on) composing a functional area. A functional area´s level 2 (L2) diagrams show the physical packaging of logic along major data paths. Level 3 (L3) diagrams provide a simplified representation of all logic within a functional area. The level 4 (L4) diagrams in this manual show all physical components of a functional area as well as test points. The L0 through L3 diagrams are provided in a companion manual.

CHASSIS MAPS

The Central Processor (CP) and Central Memory (CM) chassis maps are shown in appendix A. Figures A-1-1 through A-1-11 show the location of the CP panels as well as the location of the zero insertion force (ZIF) boards, auxiliary (AUX) boards, and large scale integration (LSI) arrays within the panels. Figures A-2-1 and A-2-2 show the location of memory boards in the panels of the BS137-A CM and the BS213-A CM, respectively.



NOTES:

1. **MULTIPLE OCCURRENCE LOGIC DIAGRAM** CMC 4.0- DEFINES THE FOLLOWING TBPH BOARD LOCATIONS: AIE/3P01, AIF/3P02, AIG/3P03, AIH/3P04, AIL/3P05, AIM/3P06, AIN/3P07, AIP/3P08, AIR/3P09. TO REFERENCE INDIVIDUAL SIGNAL SOURCES/DESTINATIONS, USE VIRTUAL NAME ON LOGIC PRINT TO FIND ARRAY NAME ON OCCURRENCE CHART, CMC 4.0-0CA THRU 4.0-0CD.
2. BACKUP CHARTS ON SHEETS CMC 4.0-00A, CMC 4.0-00B.
3. IOU DATA BITS N+24,N+32,N+40,N+48,N+56.
4. IOU DATA BITS N+16,N+24,N+32,N+40,N+48,N+56.
5. IOU DATA BITS N+16,N+24,N+32,N+40,N+48,N+56.

6 LENGTH 1 TO 2 INCHES.
8 LENGTH 1 INCH MAXIMUM.
T LENGTH 3 TO 7 INCHES.
9 LENGTH 3 TO 4 INCHES.

NO. OF CHIPS USED	92
NO. OF CONN. PINS USED	207
NO. OF TEST POINTS USED	
TOTAL 4.TV POWER (WATTS)	
TOTAL 2.2V POWER (WATTS)	

CONTROL DATA
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.0,3.1,3.15
AUX.IOU/RECEIVER/REGISTER CLOCK PHASE
GENERATE; AUX. IOU WRITE BUFFER.
BUFFER ADDRESS FANOUTS
TBPH: 1
AD112-C

CODE IDENT	DWG NO	REV
	60458190	M

SHEET	PAGE
CMC 4.0-00	1T-1

TR30 LOC: G2 NAME: TR0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-24		T	A1	1	AUX	24	T1	F3-1	1
			C1	2	MK	23	F1	•G2-8	
GND			B1	3	BIT N				
PIC-19		T	A2	6	AUX	7	T2	F3-3	1
			C2	5	TAG	8	F2	•G2-11	
GND			B2	4	BIT N				
PIC-20		T	A3	13	ECS	12	T3	F3-17	1
			C3	14	FUNC	11	F3	•D1-2	
GND			B3	15	BIT N				
			A4	18		19	T4		
			C4	17		20	F4		
			B4	16					

• TO LO SOURCE

TR30 LOC: G3 NAME: TR1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-36		T	A1	1	AUX	24	T1	F3-19	1
			C1	2	ADRS	23	F1	•G3-8	
GND			B1	3	BIT N				
PIC-32		T	A2	6		7	T2	F3-23	1
			C2	5		8	F2	•G3-11	
GND			B2	4	BIT N+8				
PIC-31		T	A3	13		12	T3	F4-1	1
			C3	14		11	F3	•D1-1	
GND			B3	15	BIT N+16				
PIC-35		T	A4	18		19	T4	F4-3	1
			C4	17		20	F4	•G3-23	
GND			B4	16	BIT N+24				

• TO LO SOURCE

TR30 LOC: G4 NAME: TR2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-48		T	A1	1	AUX	24	T1	F4-17	1
			C1	2	DATA	23	F1	•G4-8	
GND			B1	3	BIT N				
PIC-43		T	A2	6		7	T2	F4-19	1
			C2	5		8	F2	•G4-11	
GND			B2	4	BIT N+8				
PIC-44		T	A3	13		12	T3	F4-23	1
			C3	14		11	F3	•E2-8	
GND			B3	15	BIT N+16				
PIC-47		T	A4	18		19	T4	F5-1	1
			C4	17		20	F4	•G4-23	
GND			B4	16	BIT N+24				

• TO LO SOURCE

TR30 LOC: G5 NAME: TR3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-59		T	A1	1	AUX	24	T1	F5-3	1
			C1	2	DATA	23	F1	•G5-8	
GND			B1	3	BIT N+32				
PIC-60		T	A2	6		7	T2	F5-17	1
			C2	5		8	F2	•G5-11	
GND			B2	4	BIT N+40				
PIC-55		T	A3	13		12	T3	F5-19	1
			C3	14		11	F3	•E2-6	
GND			B3	15	BIT N+48				
PIC-64		T	A4	18		19	T4	F5-23	1
			C4	17		20	F4	•G5-23	
GND			B4	16	BIT N+56				

• TO LO SOURCE

TR30 LOC: G6 NAME: TR4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-121		T	A1	1	IOU	24	T1	F7-1	1
			C1	2	MK	23	F1	•G6-8	
GND			B1	3	BIT N				
PIC-118		T	A2	6	IOU	7	T2	F7-3	1
			C2	5	TAG	8	F2	•G6-11	
GND			B2	4	BIT N				
PIC-117		T	A3	13	IOU	12	T3	F7-17	1
			C3	14	FUNC	11	F3	•E2-3	
GND			B3	15	BIT N				
			A4	18		19	T4		
			C4	17		20	F4		
			B4	16					

• TO LO SOURCE

TR30 LOC: G7 NAME: TR5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-126		T	A1	1	IOU	24	T1	F7-19	1
			C1	2	ADRS	23	F1	•G7-20	
GND			B1	3	BIT N				
PIC-125		T	A2	6		7	T2	F7-23	1
			C2	5		8	F2	•G7-23	
GND			B2	4	BIT N+8				
PIC-122		T	A3	13		12	T3	F8-1	1
			C3	14		11	F3	•G7-11	
GND			B3	15	BIT N+16				
PIC-129		T	A4	18		19	T4	F8-3	1
			C4	17		20	F4	•G12-12	
GND			B4	16	BIT N+24				

• TO LO SOURCE

TR30 LOC: G8 NAME: TR6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-134		T	A1	1	IOU	24	T1	F8-17	1
			C1	2	DATA	23	F1	•G8-20	
GND			B1	3	BIT N				
PIC-133		T	A2	6		7	T2	F8-19	1
			C2	5		8	F2	•G8-23	
GND			B2	4	BIT N+8				
PIC-130		T	A3	13		12	T3	F8-23	1
			C3	14		11	F3	•G8-8	
GND			B3	15	BIT N+16				
PIC-137		T	A4	18		19	T4	F9-1	1
			C4	17		20	F4	•G12-5	
GND			B4	16	BIT N+24				

• TO LO SOURCE

TR30 LOC: G9 NAME: TR7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-142		T	A1	1	IOU	24	T1	F9-3	1
			C1	2	DATA	23	F1	•G9-20	
GND			B1	3	BIT N+32				
PIC-141		T	A2	6		7	T2	F9-17	1
			C2	5		8	F2	•G9-23	
GND			B2	4	BIT N+40				
PIC-138		T	A3	13		12	T3	F9-19	1
			C3	14		11	F3	•G9-11	
GND			B3	15	BIT N+48				
PIC-145		T	A4	18		19	T4	F9-23	1
			C4	17		20	F4	•G12-13	
GND			B4	16	BIT N+56				

• TO LO SOURCE

12102 LOC: F3 NAME: RS0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G2-24			A1	1	AUX MK	8	T1	E4-2	
			B1	2	BIT N	7	F1	TERM	
G2-7			A2	3	AUX TAG	5	T2	E4-1	
			B2	4	BIT N	6	F2	TERM	
G2-12			A3	17	AUX FUNC	16	T3	E4-20	
			B3	18	BIT N	15	F3	TERM	
G3-24			A4	19	AUX ADRS	13	T4	E4-19	
			B4	20	BIT N	14	F4	TERM	
G3-7			A5	23	AUX ADRS	12	T5	E4-18	
			B5	24	BIT N+8	11	F5	TERM	
			CX	22					

12102 LOC: F4 NAME: RS1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G3-12			A1	1	AUX ADRS	8	T1	E4-17	
			B1	2	BIT N+16	7	F1	TERM	
G3-19			A2	3	AUX ADRS	5	T2	E5-2	
			B2	4	BIT N+24	6	F2	TERM	
G4-24			A3	17	AUX DATA	16	T3	E5-1	
			B3	18	BIT N	15	F3	TERM	
G4-7			A4	19	AUX DATA	13	T4	E5-20	
			B4	20	BIT N+8	14	F4	TERM	
G4-12			A5	23	AUX DATA	12	T5	E5-19	
			B5	24	BIT N+16	11	F5	TERM	
			CX	22					

12102 LOC: F5 NAME: RS2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G4-19			A1	1	AUX DATA	8	T1	E5-18	
			B1	2	BIT N+24	7	F1	TERM	
G5-24			A2	3		5	T2	E5-17	
			B2	4	BIT N+32	6	F2	TERM	
G5-7			A3	17		16	T3	E6-2	
			B3	18	BIT N+40	15	F3	TERM	
G5-12			A4	19		13	T4	E6-1	
			B4	20	BIT N+48	14	F4	TERM	
G5-19			A5	23		12	T5	E6-20	
			B5	24	BIT N+56	11	F5	TERM	
			CX	22					

12102 LOC: F7 NAME: RS3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G6-24			A1	1	IOU MK	8	T1	E6-19	
			B1	2	BIT N	7	F1	TERM	
G6-7			A2	3	IOU TAG	5	T2	E6-18	
			B2	4	BIT N	6	F2	TERM	
G6-12			A3	17	IOU FUNC	16	T3	E6-17	
			B3	18	BIT N	15	F3	TERM	
G7-24			A4	19	IOU ADRS	13	T4	E7-2	
			B4	20	BIT N	14	F4	TERM	
G7-7			A5	23	IOU ADRS	12	T5	E7-1	
			B5	24	BIT N+8	11	F5	TERM	
			CX	22					

12102 LOC: F8 NAME: RS4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G7-12			A1	1	IOU ADRS	8	T1	E7-20	
			B1	2	BIT N+16	7	F1	TERM	
G7-19			A2	3	IOU ADRS	5	T2	E7-19	
			B2	4	BIT N+24	6	F2	TERM	
G8-24			A3	17	IOU DATA	16	T3	E7-18	
			B3	18	BIT N	15	F3	TERM	
G8-7			A4	19	IOU DATA	13	T4	E7-17	
			B4	20	BIT N+8	14	F4	TERM	
G8-12			A5	23	IOU DATA	12	T5	E8-2	
			B5	24	BIT N+16	11	F5	TERM	
			CX	22					

12102 LOC: F9 NAME: RS5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G8-19			A1	1	IOU DATA	8	T1	E8-1	
			B1	2	BIT N+24	7	F1	TERM	
G9-24			A2	3		5	T2	E8-20	
			B2	4	BIT N+32	6	F2	TERM	
G9-7			A3	17		16	T3	E8-19	
			B3	18	BIT N+40	15	F3	TERM	
G9-12			A4	19		13	T4	E8-18	
			B4	20	BIT N+48	14	F4	TERM	
G9-19			A5	23		12	T5	E8-17	
			B5	24	BIT N+56	11	F5	TERM	
			CX	22					

12150 LOC: E4 NAME: DS0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F3-8	E4-3		D1	2	AUX	3	T1	D4-2	
					MK	4	F1	TERM	
F3-5	E4-6		D2	1	AUX	6	T2	D4-1	
					TAG	5	F2	TERM	
F3-16	E4-8		D3	20	AUX FUNC	8	T3	D4-20	
					BIT N	7	F3	TERM	
F3-13	E4-12		D4	19	AUX ADRS	12	T4	D4-19	
					BIT N	11	F4	TERM	
F3-12	E4-14		D5	18	AUX ADRS	14	T5	D4-18	
					BIT N+8	13	F5	TERM	
F4-8	E4-16		D6	17	AUX ADRS	16	T6	D4-17	
					BIT N+16	15	F6	TERM	
			C1	24	NOTE:				
F10-13	E4-22		C2	23	C2 FROM MPI PIN F7				
E4-23		T	MS	22	MS FROM MPI PIN F7				

12150 LOC: E5 NAME: DS1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F4-5	E5-3		D1	2	AUX ADRS	3	T1	D5-2	
					BIT N+24	4	F1	TERM	
F4-16	E5-6		D2	1	AUX DATA	6	T2	D5-1	
					BIT N	5	F2	TERM	
F4-13	E5-8		D3	20		8	T3	D5-20	
					BIT N+8	7	F3	TERM	
F4-12	E5-12		D4	19		12	T4	D5-19	
					BIT N+16	11	F4	TERM	
F5-8	E5-14		D5	18		14	T5	D5-18	
					BIT N+24	13	F5	TERM	
F5-5	E5-16		D6	17		16	T6	D5-17	
					BIT N+32	15	F6	TERM	
			C1	24	NOTE:				
E6-23	E5-22		C2	23	C2 FROM MPI PIN F8				
E5-23		T	MS	22	MS FROM MPI PIN F8				

12150 LOC: E6 NAME: DS2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F5-16	E6-3		D1	2	AUX DATA	3	T1	D6-2	
					BIT N+40	4	F1	TERM	
F5-13	E6-6		D2	1		6	T2	D6-1	
					BIT N+48	5	F2	TERM	
F5-12	E6-8		D3	20		8	T3	D6-20	
					BIT N+56	7	F3	TERM	
F7-8	E6-12		D4	19	IOU	12	T4	D6-19	
					MK	11	F4	TERM	
F7-5	E6-14		D5	18	IOU	14	T5	D6-18	
					TAG	13	F5	TERM	
F7-16	E6-16		D6	17	IOU FUNC	16	T6	D6-17	
					BIT N	15	F6	TERM	
			C1	24	NOTE:				
E6-22	E5-23		C2	23	C2 FROM MPI PIN F7				
F10-14	E6-23		MS	22	MS FROM MPI PIN F7				

12150 LOC: E7 NAME: DS3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F7-13	E7-3		D1	2	IOU ADRS	3	T1	D7-2	
					BIT N	4	F1	TERM	
F7-12	E7-6		D2	1		6	T2	D7-1	
					BIT N+8	5	F2	TERM	
F8-8	E7-8		D3	20		8	T3	D7-20	
					BIT N+16	7	F3	TERM	
F8-5	E7-12		D4	19		12	T4	D7-19	
					BIT N+24	11	F4	TERM	
F8-16	E7-14		D5	18	IOU DATA	14	T5	D7-18	
					BIT N	13	F5	TERM	
F8-13	E7-16		D6	17	IOU DATA	16	T6	D7-17	
					BIT N+8	15	F6	TERM	
			C1	24	NOTE:				
E7-22			C2	23	C2 FROM MPI PIN F6				
E8-22	E7-23	T	MS	22	MS FROM MPI PIN F8				

12150 LOC: E8 NAME: DS4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F8-12	E8-3		D1	2	IOU DATA	3	T1	D8-2	
					BIT N+16	4	F1	TERM	
F9-8	E8-6		D2	1		6	T2	D8-1	
					BIT N+24	5	F2	TERM	
F9-5	E8-8		D3	20		8	T3	D8-20	
					BIT N+32	7	F3	TERM	
F9-16	E8-12		D4	19		12	T4	D8-19	
					BIT N+40	11	F4	TERM	
F9-13	E8-14		D5	18		14	T5	D8-18	
					BIT N+48	13	F5	TERM	
F9-12	E8-16		D6	17		16	T6	D8-17	
					BIT N+56	15	F6	TERM	
			C1	24	NOTE:				
F10-05	E8-22		C2	23	C2 FROM MPI PIN F5				
E8-23	E7-22		MS	22	MS FROM MPI PIN F5				

NOTES: ⚠ REFER TO CMC 4.0-00.

CONTROL DATA CORPORATION ARDEN HILLS OPERATIONS	LEVEL 4 BACKUP CHART SUPPLEMENTAL WIRING INFORMATION CMC 4.0-00 7BPH; ⚠ AD112-C	CODE IDENT 34010	D	DWG NO 60458190 SHEET CMC 4.0-00A	REV J 17-2

12151 LOC: D4 NAME: RG0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E4-3		T	D1	2	AUX	3	T1	TERM	
					MK	4	F1	C8-16	1
E4-6		T	D2	1	AUX	6	T2	TERM	
					TAG	5	F2	C3-16	1
E4-8		T	D3	20	AUX FUNC	8	T3	TERM	
					BIT N	7	F3	C3-15	1
E4-12		T	D4	19	AUX ADRS	12	T4	TERM	
					BIT N	11	F4	C4-16	1
E4-14		T	D5	18		14	T5	TERM	
					BIT N+8	13	F5	C4-15	1
E4-16		T	D6	17		16	T6	TERM	
					BIT N+16	15	F6	C4-14	1
D5-24		T	C1	24	NOTE: C1 FROM MPO PIN T5				
			C2	23					
			MS	22					

12151 LOC: D5 NAME: RG1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E5-3		T	D1	2	AUX ADRS	3	T1	TERM	
					BIT N+24	4	F1	C4-13	1
E5-6		T	D2	1	AUX DATA	6	T2	TERM	
					BIT N	5	F2	C6-16	1
E5-8		T	D3	20		8	T3	TERM	
					BIT N+8	7	F3	C6-15	1
E5-12		T	D4	19		12	T4	TERM	
					BIT N+16	11	F4	C6-14	1
E5-14		T	D5	18		14	T5	TERM	
					BIT N+24	13	F5	C6-13	1
E5-16		T	D6	17		16	T6	TERM	
					BIT N+32	15	F6	C7-16	1
G10-11	D4-24		C1	24	NOTE: C1 FROM MPO PIN T5				
			C2	23					
			MS	22					

12151 LOC: D6 NAME: RG2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E6-3		T	D1	2	AUX DATA	3	T1	TERM	
					BIT N+40	4	F1	C7-15	1
E6-6		T	D2	1		6	T2	TERM	
					BIT N+48	5	F2	C7-14	1
E6-8		T	D3	20		8	T3	TERM	
					BIT N+56	7	F3	C7-13	1
E6-12		T	D4	19	IOU	12	T4	TERM	
					MK	11	F4	B5-16	1
E6-14		T	D5	18	IOU	14	T5	TERM	
					TAG	13	F5	B8-16	1
E6-16		T	D6	17	IOU FUNC	16	T6	TERM	
					BIT N	15	F6	B8-15	1
D7-24		T	C1	24	NOTE: C1 FROM MPO PIN T6				
			C2	23					
			MS	22					

12151 LOC: D7 NAME: RG3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E7-3		T	D1	2	IOU ADRS	3	T1	TERM	
					BIT N	4	F1	B7-16	1
E7-6		T	D2	1		6	T2	TERM	
					BIT N+8	5	F2	B7-15	1
E7-8		T	D3	20		8	T3	TERM	
					BIT N+16	7	F3	B7-14	1
E7-12		T	D4	19		12	T4	TERM	
					BIT N+24	11	F4	B7-13	1
E7-14		T	D5	18	IOU DATA	14	T5	TERM	
					BIT N	13	F5	B3-16	1
E7-16		T	D6	17	IOU DATA	16	T6	TERM	
					BIT N+8	15	F6	B3-15	1
G10-12	D6-24		C1	24	NOTE: C1 FROM MPO PIN T6				
			C2	23					
			MS	22					

12151 LOC: D8 NAME: RG4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E8-3		T	D1	2	IOU DATA	3	T1	TERM	
					BIT N+16	4	F1	B3-14	1
E8-6		T	D2	1		6	T2	TERM	
					BIT N+24	5	F2	B3-13	1
E8-8		T	D3	20		8	T3	TERM	
					BIT N+32	7	F3	B4-16	1
E8-12		T	D4	19		12	T4	TERM	
					BIT N+40	11	F4	B4-15	1
E8-14		T	D5	18		14	T5	TERM	
					BIT N+48	13	F5	B4-14	1
E8-16		T	D6	17		16	T6	TERM	
					BIT N+56	15	F6	B4-13	
G10-1		T	C1	24	NOTE: C1 FROM MPO PIN T7				
			C2	23					
			MS	22					

12112 LOC: D10 NAME: BAF

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-98	D10-24		A1	23	BUFF ADRS N	8	T1	PIA-32	
						7	T2	PIA-30	
						6	F1	PIA-24	
						5	F2	PIA-28	
D10-23	E11-19		A2	24	BUFF ADRS N	1	T3	PIA-29	
						2	T4	PIA-33	
						3	F3	PIA-27	
						4	F4	PIA-23	
PIC-91	D10-20		A3	19	BUFF ADRS N+1	18	T5	PIB-31	
						17	T6	PIB-32	
						16	F5	PIB-34	
						15	F6	PIB-38	
D10-19	E11-17		A4	20	BUFF ADRS N+1	11	T7	PIB-30	
						12	T8	PIB-29	
						13	F7	PIB-35	
						14	F8	PIB-37	
			CX	22					

12102 LOC: E11 NAME: BAF0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D10-24		T	A1	19	BUFF ADRS	13	T1	PIA-31	
			B1	20	BIT N	14	F1	TP-45	

12102 LOC: E11 NAME: BAF1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D10-20		T	A1	17	BUFF ADRS	16	T1	PIB-33	
			B1	18	BIT N+1	15	F1	TP-38	

12102 LOC: G12 NAME: L0SC1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L0 SOURCE	5	T1	G08-20	
			B1	4		6	F1		

12102 LOC: G12 NAME: L0SC2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	23	L0 SOURCE	12	T1	G07-20	
			B1	20		11	F1		

12102 LOC: G12 NAME: L0SC3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	19	L0 SOURCE	13	T1	G09-20	
			B1	20		14	F1		

- TR30 LO SOURCE

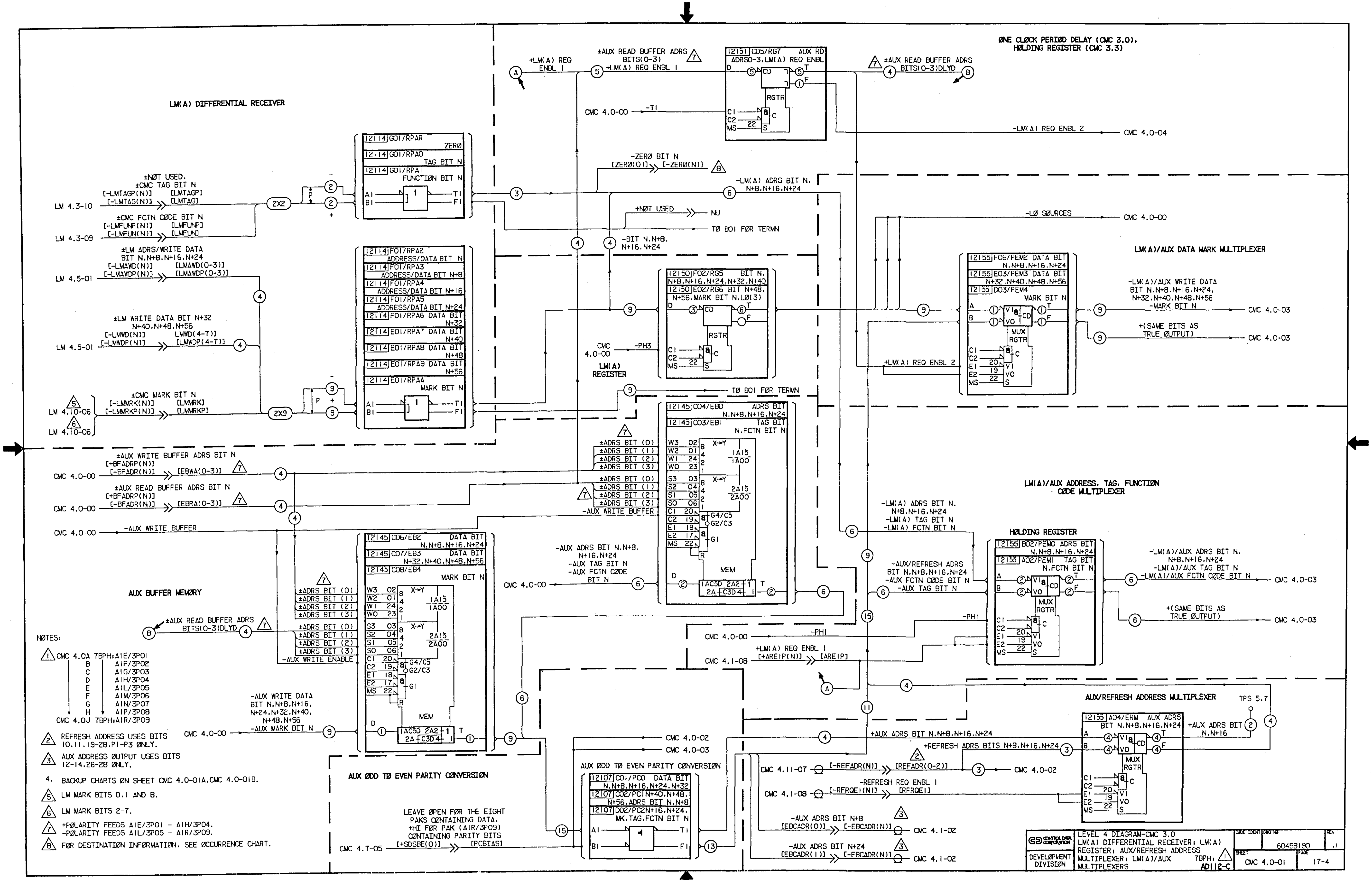
LO SOURCE	T	DESTINATION FIRST	SECOND	THIRD	FOURTH
D1-1	T	G3-11	G3-8	G3-23	G3-20
D1-2	T	G2-11	G2-8	G2-23	
E2-3	T	G6-11	G6-8	G6-23	
E2-6	T	G5-11	G5-8	G5-23	G5-20
E2-8	T	G4-11	G4-8	G4-23	G4-20
G12-5	T	G8-20	G8-23	G8-8	G8-11
G12-12	T	G7-20	G7-23	G7-8	G7-11
G12-13	T	G9-20	G9-23	G9-8	G9-11

NOTES: △1 REFER TO CMC 4.0-00.

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.0-00
7BPH: △1
AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.0-00B 17-3


ONE CLOCK PERIOD DELAY (CMC 3.0), HOLDING REGISTER (CMC 3.3)
LM(A) DIFFERENTIAL RECEIVER
±NOT USED, ±CMC TAG BIT N
[-LMTAGP(N)] [LMTAGP]
[-LMTAG(N)] [LMTAG]
LM 4.3-10
±CMC FCTN CODE BIT N
[-LMFUNP(N)] [LMFUNP]
[-LMFUN(N)] [LMFUN]
LM 4.3-09
±LM ADRS/WRITE DATA BIT N,N+8,N+16,N+24
[-LMAWD(N)] [LMAWD(0-3)]
[-LMAWDP(N)] [LMAWDP(0-3)]
LM 4.5-01
±LM WRITE DATA BIT N+32 N+40,N+48,N+56
[-LMWD(N)] LMWD(4-7)]
[-LMWDP(N)] [LMWDP(4-7)]
LM 4.5-01
±CMC MARK BIT N
[-LMMRK(N)] [LMMRK]
[-LMMRKP(N)] [LMMRKP]
LM 4.10-06
LM 4.10-06
2X2
2X9
12114 G01/RPAR ZERO
12114 G01/RPA0 TAG BIT N
12114 G01/RPA1 FUNCTION BIT N
12114 F01/RPA2 ADDRESS/DATA BIT N
12114 F01/RPA3 ADDRESS/DATA BIT N+8
12114 F01/RPA4 ADDRESS/DATA BIT N+16
12114 F01/RPA5 ADDRESS/DATA BIT N+24
12114 F01/RPA6 DATA BIT N+32
12114 E01/RPA7 DATA BIT N+40
12114 E01/RPA8 DATA BIT N+48
12114 E01/RPA9 DATA BIT N+56
12114 E01/RPAA MARK BIT N
+LM(A) REQ ENBL 1
±AUX READ BUFFER ADRS BITS(0-3)
+LM(A) REQ ENBL 1
12151 C05/RGT AUX RD ADRS0-3,LM(A) REQ ENBL
CMC 4.0-00
-T1
RGTR
±AUX READ BUFFER ADRS BITS(0-3)DLYD
-LM(A) REQ ENBL 2
CMC 4.0-04
-ZERO BIT N
[ZERO(0)] [-ZERO(N)]
-LM(A) ADRS BIT N, N+8,N+16,N+24
+NOT USED
NU
TO B01 FOR TERMN
-BIT N,N+8, N+16,N+24
-LO SOURCES
CMC 4.0-00
12150 F02/RG5 BIT N, N+8,N+16,N+24,N+32,N+40
12150 E02/RG6 BIT N+48, N+56,MARK BIT N,L0(3)
CMC 4.0-00
-PH3
LM(A) REGISTER
TO B01 FOR TERMN
LM(A)/AUX DATA MARK MULTIPLEXER
12155 F06/PEM2 DATA BIT N,N+8,N+16,N+24
12155 E03/PEM3 DATA BIT N+32,N+40,N+48,N+56
12155 D03/PEM4 MARK BIT N
MUX RGTR
+LM(A) REQ ENBL 2
-LM(A)/AUX WRITE DATA BIT N,N+8,N+16,N+24, N+32,N+40,N+48,N+56 -MARK BIT N
CMC 4.0-03
+(SAME BITS AS TRUE OUTPUT)
CMC 4.0-03
±AUX WRITE BUFFER ADRS BIT N
[+BFADRP(N)]
[-BFADR(N)] [EBWA(0-3)]
CMC 4.0-00
±AUX READ BUFFER ADRS BIT N
[+BFADRP(N)]
[-BFADR(N)] [EBRA(0-3)]
CMC 4.0-00
-AUX WRITE BUFFER
CMC 4.0-00
±ADRS BIT (0)
±ADRS BIT (1)
±ADRS BIT (2)
±ADRS BIT (3)
-AUX WRITE BUFFER
12145 C04/EB0 ADRS BIT N,N+8,N+16,N+24
12145 C03/EB1 TAG BIT N,FCTN BIT N
X→Y
1A15 1A00
2A15 2A00
G4/C5
G2/C3
G1
MEM
1AC5D 2A2 2A C3D4
LM(A)/AUX ADDRESS, TAG, FUNCTION CODE MULTIPLEXER
-LM(A) ADRS BIT N, N+8,N+16,N+24 -LM(A) TAG BIT N -LM(A) FCTN BIT N
HOLDING REGISTER
12155 B02/PEM0 ADRS BIT N,N+8,N+16,N+24
12155 A02/PEM1 TAG BIT N,FCTN BIT N
-AUX/REFRESH ADRS BIT N,N+8,N+16,N+24 -AUX FCTN CODE BIT N -AUX TAG BIT N
-PH1
-LM(A)/AUX ADRS BIT N, N+8,N+16,N+24 -LM(A)/AUX TAG BIT N -LM(A)/AUX FCTN CODE BIT N
CMC 4.0-03
+(SAME BITS AS TRUE OUTPUT)
CMC 4.0-03
-AUX ADRS BIT N,N+8, N+16,N+24 -AUX TAG BIT N -AUX FCTN CODE BIT N
CMC 4.0-00
AUX BUFFER MEMORY
12145 C06/EB2 DATA BIT N,N+8,N+16,N+24
12145 C07/EB3 DATA BIT N+32,N+40,N+48,N+56
12145 C08/EB4 MARK BIT N
-AUX WRITE ENABLE
±AUX READ BUFFER ADRS BITS(0-3)DLYD
-AUX WRITE DATA BIT N,N+8,N+16, N+24,N+32,N+40, N+48,N+56 -AUX MARK BIT N
CMC 4.0-00
CMC 4.0-00
-PH1
+LM(A) REQ ENBL 1
[+AREIP(N)] [AREIP]
CMC 4.1-08
+AUX ADRS BIT N,N+8,N+16,N+24
CMC 4.0-02
CMC 4.0-03
AUX ODD TO EVEN PARITY CONVERSION
AUX ODD TO EVEN PARITY CONVERSION
12107 C01/PC0 DATA BIT N,N+8,N+16,N+24,N+32
12107 C02/PC1N+40,N+48, N+56,ADRS BIT N,N+8
12107 D02/PC2N+16,N+24, MK,TAG,FCTN BIT N
LEAVE OPEN FOR THE EIGHT PAKS CONTAINING DATA, +HI FOR PAK (A1R/3P09) CONTAINING PARITY BITS
CMC 4.7-05
[+SDSBE(0)] [PCBIAS]
+REFRESH ADRS BITS N+8,N+16,N+24
CMC 4.11-07
[-REFADR(N)] [REFADR(0-2)]
CMC 4.0-02
-REFRESH REQ ENBL 1
CMC 4.1-08
[-RFRQE1(N)] [RFRQE1]
-AUX ADRS BIT N+8
[EBCADR(0)] [-EBCADR(N)]
CMC 4.1-02
-AUX ADRS BIT N+24
[EBCADR(1)] [-EBCADR(N)]
CMC 4.1-02
AUX/REFRESH ADDRESS MULTIPLEXER
TPS 5.7
12155 A04/ERM AUX ADRS BIT N,N+8,N+16,N+24
+AUX ADRS BIT N,N+16
MUX RGTR

NOTES:

1. CMC 4.0A 7BPH, A1E/3P01
   - B A1F/3P02
   - C A1G/3P03
   - D A1H/3P04
   - E A1L/3P05
   - F A1M/3P06
   - G A1N/3P07
   - H A1P/3P08
   - CMC 4.0J 7BPH, A1R/3P09
2. REFRESH ADDRESS USES BITS 10,11,19-28,P1-P3 ONLY.
3. AUX ADDRESS OUTPUT USES BITS 12-14,26-28 ONLY.
4. BACKUP CHARTS ON SHEET CMC 4.0-01A,CMC 4.0-01B.
5. LM MARK BITS 0,1 AND 8.
6. LM MARK BITS 2-7.
7. +POLARITY FEEDS A1E/3P01 - A1H/3P04.
   -POLARITY FEEDS A1L/3P05 - A1R/3P09.
8. FOR DESTINATION INFORMATION, SEE OCCURRENCE CHART.

CONTROL DATA CORPORATION DEVELOPMENT DIVISION	LEVEL 4 DIAGRAM-CMC 3.0 LM(A) DIFFERENTIAL RECEIVER, LM(A) REGISTER, AUX/REFRESH ADDRESS MULTIPLEXER, LM(A)/AUX MULTIPLEXERS 7BPH, ⚠1 AD112-C	CODE IDENT	DWG NO 60458190	REV J
		SHEET CMC 4.0-01		PAGE 17-4

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12114 LOC: G01 NAME: RPAR

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-11		T	A1	2	ZERO	7	T1	P1C-3	
P2A-12		T	B1	1	BIT N	8	F1	P1C-11	

12114 LOC: G01 NAME: RPA0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-39		T	A1	4	TAG	5	T1	A2-2	1
P2A-40		T	B1	3	BIT N	6	F1	B1-12 •	

12114 LOC: G01 NAME: RPA1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-37		T	A1	18	FUNCT	15	T1	A2-4	1
P2A-38		T	B1	17	BIT N	16	F1	B1-13 •	

12114 LOC: F01 NAME: RPA2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-35		T	A1	4	ADRS/DATA	5	T1	F2-2	2
P2A-33		T	B1	3	BIT N	6	F1	B1-11 •	

12114 LOC: F01 NAME: RPA3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-31		T	A1	2	ADRS/DATA	7	T1	F2-1	2
P2A-32		T	B1	1	BIT N+8	8	F1	B1-8 •	

12114 LOC: F01 NAME: RPA4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-29		T	A1	18	ADRS/DATA	15	T1	F2-20	2
P2A-30		T	B1	17	BIT N+16	16	F1	B1-1 •	

12114 LOC: F01 NAME: RPA5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-27		T	A1	20	ADRS/DATA	13	T1	F2-19	2
P2A-28		T	B1	19	BIT N+24	14	F1	B1-5 •	

12114 LOC: F01 NAME: RPA6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-26		T	A1	24	DATA	11	T1	F2-18	1
P2A-24		T	B1	23	BIT N+32	12	F1	B1-7 •	

12114 LOC: E01 NAME: RPA7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-21		T	A1	2	DATA	7	T1	F2-17	1
P2A-22		T	B1	1	BIT N+40	8	F1	B1-6 •	

12114 LOC: E01 NAME: RPA8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-19		T	A1	4	DATA	5	T1	E2-19	1
P2A-20		T	B1	3	BIT N+48	6	F1	B1-4 •	

12114 LOC: E01 NAME: RPA9

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-17		T	A1	18	DATA	15	T1	E2-18	1
P2A-18		T	B1	17	BIT N+56	16	F1	B1-2 •	

12114 LOC: E01 NAME: RPAA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-15		T	A1	20	MARK	13	T1	E2-17	1
P2A-13		T	B1	19	BIT N	14	F1	B1-3 •	

• UNUSED FALSE OUTPUTS OF 12114'S
GO TO LOC B01 PADS FOR TERMINATION

12150 LOC: F02 NAME: RG5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F1-5	B2-2		D1	2	N	3	T1	F6-2	1
						4	F1	TERM	
F1-7	B2-4		D2	1	N+8	6	T2	F6-4	1
						5	F2	TERM	
F1-15	B2-16		D3	20	N+16	8	T3	F6-16	1
						7	F3	TERM	
F1-13	B2-18		D4	19	N+24	12	T4	F6-18	1
						11	F4	TERM	
F1-11		T	D5	18	N+32	14	T5	E3-2	1
						13	F5	TERM	
E1-7		T	D6	17	N+40	16	T6	E3-4	1
						15	F6	TERM	
G10-23		T	C1	24					
			C2	23					
			MS	22					

12150 LOC: E02 NAME: RG6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E1-5		T	D1	19	N+48	12	T1	E3-16	1
						11	F1	TERM	
E1-15		T	D2	18	N+56	14	T2	E3-18	1
						13	F2	TERM	
E1-13		T	D3	17	MARK	16	T3	D3-2	1
					BIT N	15	F3	TERM	
			D4	2	LO	3	T4	G6-11	1
					SOURCE	4	F4	TERM	
			D5	1	LO	6	T5	G5-11	1
					SOURCE	5	F5	TERM	
			D6	20	LO	8	T6	G4-11	1
					SOURCE	7	F6	TERM	
F11-14		T	C1	24					
			C2	23					
			MS	22					

12151 LOC: C05 NAME: RG7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C4-3		T	D1	2	ECS RD	3	T1	C6-3	3
					ADRS 0	4	F1	TERM	
C4-4		T	D2	1	1	6	T2	C6-4	3
						5	F2	TERM	
C4-5		T	D3	20	2	8	T3	C6-5	3
						7	F3	TERM	
C4-6		T	D4	19	3	12	T4	C6-6	3
						11	F4	TERM	
B2-20		T	D5	18	P3A REQ	14	T5	D3-19	6
					ENABLE	13	F5	G12-18	6
			D6	17		16	T6		
						15	F6		
F10-18		T	C1	24					
			C2	23					
			MS	22					

12155 LOC: F06 NAME: PEM2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F2-3		T	A1	2	DATA	8	T1	C9-2	1
C1-4		T	B1	1	BIT N	7	F1	E10-1	1
F2-6		T	A2	4	N+8	5	T2	C9-4	1
C1-6		T	B2	3		6	F2	E10-3	1
F2-8		T	A3	16	N+16	13	T3	C9-16	1
C1-12		T	B3	15		14	F3	E10-15	1
F2-12		T	A4	18	N+24	12	T4	C9-18	1
C1-14		T	B4	17		11	F4	E10-17	1
			C1	24					
			C2	23					
F6-19		T	E1	20					
E3-20	F6-20		E2	19					
			MS	22					

12155 LOC: E03 NAME: PEM3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F2-14		T	A1	2	DATA	8	T1	D9-2	1
C1-16		T	B1	1	BIT N+32	7	F1	C10-1	1
F2-16		T	A2	4	N+40	5	T2	D9-4	1
C2-4		T	B2	3		6	F2	C10-3	1
E2-12		T	A3	16	N+48	13	T3	D9-16	1
C2-6		T	B3	15		14	F3	C10-15	1
E2-14		T	A4	18	N+56	12	T4	D9-18	1
C2-12		T	B4	17		11	F4	C10-17	1
			C1	24					
			C2	23					
E3-19	F6-19		E1	20					
D3-20	E3-20		E2	19					
			MS	22					

12155 LOC: D03 NAME: PEM4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E2-16		T	A1	2	MARK	8	T1	E9-2	1
D2-12		T	B1	1	BIT N	7	F1	A11-1	1
			A2	4		5	T2		
			B2	3		6	F2		
			A3	16		13	T3		
			B3	15		14	F3		
			A4	18		12	T4		
			B4	17		11	F4		
			C1	24					
			C2	23					
D3-19	E3-19		E1	20					
C5-14	D3-20		E2	19					
			MS	22					

12155 LOC: B02 NAME: PEM0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F2-2		T	A1	2	ADRS	8	T1	B9-2	1
A4-7		T	B1	1	BIT N	7	F1	A10-1	1
F2-1		T	A2	4	BIT N+8	5	T2	B9-4	1
A4-6		T	B2	3		6	F2	A10-3	1
F2-20		T	A3	16	BIT N+16	13	T3	B9-16	1
A4-14		T	B3	15		14	F3	A10-15	1
F2-19		T	A4	18	BIT N+24	12	T4	B9-18	1
A4-11		T	B4	17		11	F4	A10-17	1
F11-6	A02-24		C1	24					
			C2	23					
B2-19	C5-18		E1	20					
A2-19	B2-20		E2	19					
			MS	22					

12155 LOC: A02 NAME: PEM1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G1-5		T	A1	2	TAG	8	T1	A9-2	1
D2-14		T	B1	1	BIT N	7	F1	B10-1	1
G1-15		T	A2	4	FUNC	5	T2	A9-4	1
D2-16		T	B2	3	BIT N	6	F2	B10-3	1
			A3	16		13	T3		
			B3	15		14	F3		
			A4	18		12	T4		
			B4	17		11	F4		
B02-24		T	C1	24					
			C2	23					
P1A-7	A2-19		E1	20					
A2-20	B2-19		E2	19					
			MS	22					

12145 LOC: C6 NAME: EB2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D5-5		T	D3	16	DATA N	7	T3	C1-2	1
D5-7		T	D2	15	N+8	8	T2	C1-1	1
D5-11		T	D1	14	N+16	11	T1	C1-22	1
D5-13		T	D0	13	N+24	12	T0	C1-19	1
C4-2	C7-2		W3	2					
C4-1	C7-1		W2	1					
C4-24	C7-24		W1	24					
C4-23	C7-23		W0	23					
C5-3	C7-3		S3	3					
C5-6	C7-4		S2	4					
C5-8	C7-5		S1	5					
C5-12	C7-6		S0	6					
C7-20		T	C1	20	NOTE: PIN 20 FROM WEF PIN T1				
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: C7 NAME: EB3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D5-15		T	D3	16	DATA N+32	7	T3	C1-17	1
D6-4		T	D2	15	N+40	8	T2	C2-2	1
D6-5		T	D1	14	N+48	11	T1	C2-1	1
D6-7		T	D0	13	N+56	12	T0	C2-22	1
C6-2	C8-2		W3	2					
C6-1	C8-1		W2	1					
C6-24	C8-24		W1	24					
C6-23	C8-23		W0	23					
C6-3	C8-3		S3	3					
C6-4	C8-4		S2	4					
C6-5	C8-5		S1	5					
C6-6	C8-6		S0	6					
G11-1	C6-20		C1	20	NOTE: PIN 20 FROM WEF PIN T1				
			C2	19					
			E1	18					
			E2	17					
			MS	22					

NOTES:
⚠ REFER TO CMC 4.0-00

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.0-01
7BPH; ⚠ AD112-C

CODE IDENT		DWG NO	REV
34010	D	60458190	J
SHEET CMC 4.0-01A		17-5	

REVISION RECORD

REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12145 LOC: C8 NAME: EB4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D4-4		T	D3	16	MARK N	7	T3	D2-22	1
			D2	15			T2		
			D1	14			T1		
			D0	13			T0		
C7-2		T	W3	2					
C7-1		T	W2	1					
C7-24		T	W1	24					
C7-23		T	W0	23					
C7-3		T	S3	3					
C7-4		T	S2	4					
C7-5		T	S1	5					
C7-6		T	S0	6					
G11-8		T	C1	20	NOTE: PIN 20 FROM WEF PIN T3				
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: C4 NAME: EB0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D4-11		T	D3	16	ADRS BIT N	7	T3	C2-19	1
D4-13		T	D2	15	N+8	8	T2	C2-17	1
D4-15		T	D1	14	N+16	11	T1	D2-2	1
D5-4		T	D0	13	N+24	12	T0	D2-1	1
C3-2	C6-2		W3	2					
C3-1	C6-1		W2	1					
C3-24	C6-24		W1	24					
C3-23	C6-23		W0	23					
C3-3	C5-2		S3	3					
C3-4	C5-1		S2	4					
C3-5	C5-20		S1	5					
C3-6	C5-19		S0	6					
G11-2	C3-20		C1	20	NOTE: PIN 20 FROM WEF PIN T2				
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: C3 NAME: EB1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D4-5		T	D3	16	TAG N	7	T3	D2-19	1
D4-7		T	D2	15	FUNC N	8	T2	D2-17	1
			D1	14			T1		
			D0	13			T0		
P1A-38	C4-2		W3	2					
P1A-35	C4-1		W2	1					
P1A-34	C4-24		W1	24					
P1A-37	C4-23		W0	23					
P1A-19	C4-3		S3	3					
P1A-21	C4-4		S2	4					
P1A-20	C4-5		S1	5					
P1A-22	C4-6		S0	6					
C4-20		T	C1	20	NOTE: PIN 20 FROM WEF PIN T2				
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12107 LOC: C01 NAME: PC0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C6-7		T	A1	2	DATA	5	T1	TERM	
A5-18	C1-24		B1	3	BIT N	4	F1	F6-1	1
C6-8		T	A2	1	N+8	7	T2	TERM	
C1-3	C1-23		B2	24		6	F2	F6-3	1
C6-11		T	A3	22	N+16	11	T3	TERM	
C1-24	C1-20		B3	23		12	F3	F6-15	1
C6-12		T	A4	19	N+24	13	T4	TERM	
C1-23	C1-18		B4	20		14	F4	F6-17	1
C7-7		T	A5	17	N+32	15	T5	TERM	
C1-20	C2-18		B5	18		16	F5	E3-1	1
						8	EQ		

12107 LOC: C02 NAME: PC1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C7-8		T	A1	2	DATA	5	T1	TERM	
C2-24	D2-18		B1	3	BIT N+40	4	F1	E3-3	1
C7-11		T	A2	1	N+48	7	T2	TERM	
C2-23	C2-3		B2	24		6	F2	E3-15	
C7-12		T	A3	22	N+56	11	T3	TERM	
C2-20	C2-24		B3	23		12	F3	E3-17	1
C4-7		T	A4	19	ADRS	13	T4	A4-2	1
C2-18	C2-23		B4	20	BIT N	14	F4	TERM	
C4-8		T	A5	17	BIT N+8	15	T5	A4-4	1
C1-18	C2-20		B5	18		16	F5	P1C-40	
						8	EQ		

12107 LOC: D02 NAME: PC2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C4-11		T	A1	2	ADRS	5	T1	A4-16	1
D2-24		T	B1	3	BIT N+16	4	F1	TERM	
C4-12		T	A2	1	N+24	7	T2	A4-18	1
D2-23	D2-3		B2	24		6	F2	P1C-39	
C8-7		T	A3	22	MK	11	T3	TERM	
D2-20	D2-24		B3	23	BIT N	12	F3	D3-1	1
C3-7		T	A4	19	TAG	13	T4	TERM	
D2-18	D2-23		B4	20	BIT N	14	F4	A2-1	1
C3-8		T	A5	17	FUNC	15	T5	TERM	
C2-3	D2-20		B5	18	BIT N	16	F5	A2-3	1
						8	EQ		

12155 LOC: A04 NAME: ERM

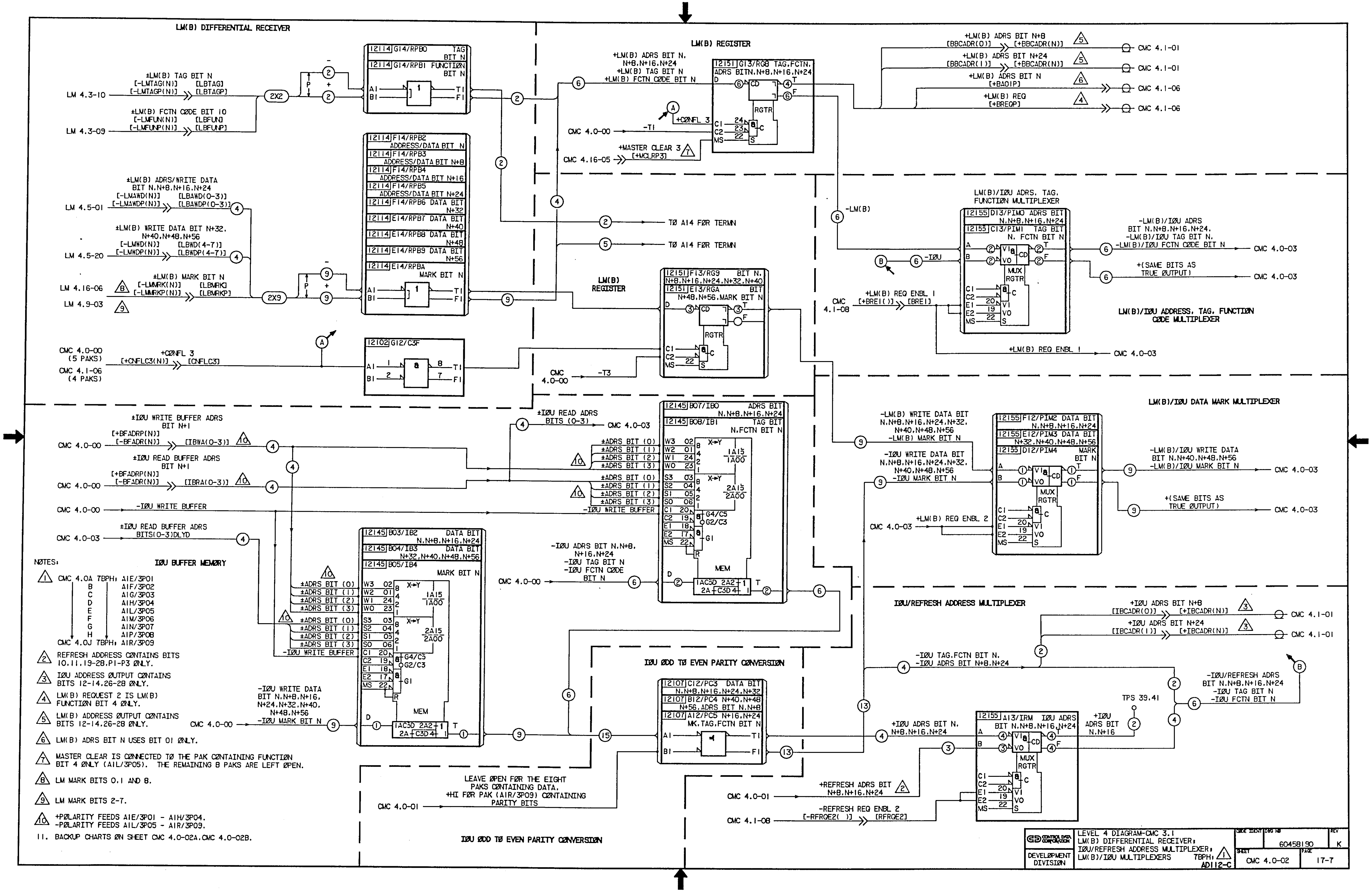
SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C2-13		T	A1	2	AUX ADRS	8	T1	TP-5	
			B1	1	BIT N	7	F1	B2-1	1
C2-15		T	A2	4	N+8	5	T2	TERM	
A13-3		T	B2	3		6	F2	B2-3	1
D2-5		T	A3	16	N+16	13	T3	TP-7	
A13-15		T	B3	15		14	F3	B2-15	1
D2-7		T	A4	18	N+24	12	T4	TERM	
A13-17		T	B4	17		11	F4	B2-17	1
			C1	24					
			C2	23					
P1A-40	A4-19		E1	20					
A4-20		T	E2	19					
			MS	22					

NOTES: ⚠1 REFER TO CMC 4.0-00

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMA 4.0-01
7BPH; ⚠1 AD112-C

CODE IDENT 34010 D
DWG NO 60458190
REV J
SHEET CMC 4.0-01B 17-6



NOTES:

1. CMC 4.0A 7BPH: A1E/3P01
   - B A1F/3P02
   - C A1G/3P03
   - D A1H/3P04
   - E A1L/3P05
   - F A1M/3P06
   - G A1N/3P07
   - H A1P/3P08
   - CMC 4.0J 7BPH: A1R/3P09
2. REFRESH ADDRESS CONTAINS BITS 10.11.19-28.P1-P3 ONLY.
3. IOU ADDRESS OUTPUT CONTAINS BITS 12-14.26-28 ONLY.
4. LM(B) REQUEST 2 IS LM(B) FUNCTION BIT 4 ONLY.
5. LM(B) ADDRESS OUTPUT CONTAINS BITS 12-14.26-28 ONLY.
6. LM(B) ADRS BIT N USES BIT 01 ONLY.
7. MASTER CLEAR IS CONNECTED TO THE PAK CONTAINING FUNCTION BIT 4 ONLY (A1L/3P05). THE REMAINING 8 PAKS ARE LEFT OPEN.
8. LM MARK BITS 0.1 AND 8.
9. LM MARK BITS 2-7.
10. +POLARITY FEEDS A1E/3P01 - A1H/3P04.
    -POLARITY FEEDS A1L/3P05 - A1R/3P09.
11. BACKUP CHARTS ON SHEET CMC 4.0-02A.CMC 4.0-02B.

		CODE IDENT	DWG NO	REV
CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.1 LM(B) DIFFERENTIAL RECEIVER, IOU/REFRESH ADDRESS MULTIPLEXER, LM(B)/IOU MULTIPLEXERS 7BPH: 1		60458190	K
DEVELOPMENT DIVISION	AD112-C	SHEET: CMC 4.0-02	PAGE: 17-7	

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12114 LOC: G14 NAME: RPB0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-39		T	A1	2	TAG	7	T1	A14-4 •	
P2B-40		T	B1	1	BIT N	8	F1	G13-2	1

12114 LOC: G14 NAME: RPB1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-37		T	A1	4	FUNC	5	T1	A14-23 •	
P2B-38		T	B1	3	BIT N	6	F1	G13-1	1

12114 LOC: F14 NAME: RPB2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-33		T	A1	2	ADRS/DATA	7	T1	F13-2	1
P2B-34		T	B1	1	BIT N	8	F1	G13-20	1

12114 LOC: F14 NAME: RPB3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-31		T	A1	4	ADRS/DATA	5	T1	F13-1	1
P2B-32		T	B1	3	BIT N+8	6	F1	G13-19	1

12114 LOC: F14 NAME: RPB4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-29		T	A1	18	ADRS/DATA	15	T1	F13-20	1
P2B-30		T	B1	17	BIT N+16	16	F1	G13-18	1

12114 LOC: F14 NAME: RPB5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-27		T	A1	20	ADRS/DATA	13	T1	F13-19	1
P2B-28		T	B1	19	BIT N+24	14	F1	G13-17	1

12114 LOC: F14 NAME: RPB6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-19		T	A1	24	DATA	11	T1	F13-18	1
P2B-20		T	B1	23	BIT N+32	12	F1	A14-2 •	

12114 LOC: E14 NAME: RPB7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-17		T	A1	2	DATA	7	T1	F13-17	1
P2B-18		T	B1	1	BIT N+40	8	F1	A14-5 •	

12114 LOC: E14 NAME: RPB8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-13		T	A1	4	DATA	5	T1	E13-2	1
P2B-14		T	B1	3	BIT N+48	6	F1	A14-6 •	

12114 LOC: E14 NAME: RPB9

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-11		T	A1	18	DATA	15	T1	E13-1	1
P2B-12		T	B1	17	BIT N+56	16	F1	A14-22 •	

12114 LOC: E14 NAME: RPBA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-9		T	A1	20	MARK	13	T1	E13-20	1
P2B-10		T	B1	19	BIT N	14	F1	A14-24 •	

• UNUSED OUTPUTS OF 12114'S GO
TO LOC A14 PADS FOR TERMINATION

12151 LOC: G13 NAME: RG8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G14-8		T	D1	2	TAG	3	T1	TERM	
					BIT N	4	F1	C13-2	2
G14-6		T	D2	1	FUNC	6	T2	PIC-170	
					BIT N	5	F2	C13-4	2
F14-8		T	D3	20	ADRS	8	T3	PIC-166	
					BIT N	7	F3	D13-2	2
F14-6		T	D4	19	BIT N+8	12	T4	PIC-173	
						11	F4	D13-4	2
F14-16		T	D5	18	BIT N+16	14	T5	TERM	
						13	F5	D13-16	2
F14-14		T	D6	17	BIT N+24	16	T6	PIC-178	
						15	F6	D13-18	2
P1B-26	G12-1		C1	24					
F10-17		T	C2	23					
P1A-39			MS	22					

12151 LOC: F13 NAME: RG9

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F14-7		T	D1	2	DATA	3	T1	F12-2	1
					BIT N	4	F1	TERM	
F14-5		T	D2	1	BIT N+8	6	T2	F12-4	1
						5	F2	TERM	
F14-15		T	D3	20	BIT N+16	8	T3	F12-16	1
						7	F3	TERM	
F14-13		T	D4	19	BIT N+24	12	T4	F12-18	1
						11	F4	TERM	
F14-11		T	D5	18	BIT N+32	14	T5	E12-2	1
						13	F5	TERM	
E14-7		T	D6	17	BIT N+40	16	T6	E12-4	1
						15	F6	TERM	
G12-8	E13-24		C1	24					
G10-8	E13-23		C2	23					
			MS	22					

12151 LOC: E13 NAME: RGA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E14-5		T	D1	2	DATA	3	T1	E12-16	1
					BIT N+48	4	F1	TERM	
E14-15		T	D2	1	DATA	6	T2	E12-18	1
					BIT N+56	5	F2	TERM	
E14-13		T	D3	20	MARK	8	T3	D12-2	1
					BIT N	7	F3	TERM	
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
F13-24		T	C1	24					
F13-23		T	C2	23					
			MS	22					

12155 LOC: D13 NAME: PIM0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G13-7		T	A1	2	ADRS	8	T1	B9-1	1
A13-7		T	B1	1	BIT N	7	F1	A10-2	1
G13-11		T	A2	4	N+8	5	T2	B9-3	1
A13-6		T	B2	3		6	F2	A10-4	1
G13-13		T	A3	16	N+16	13	T3	B9-15	1
A13-14		T	B3	15		14	F3	A10-16	1
G13-15		T	A4	18	N+24	12	T4	B9-17	1
A13-11		T	B4	17		11	F4	A10-18	1
			C1	24					
			C2	23					
B6-18	D13-19		E1	20					
D13-20	C13-20		E2	19					
			MS	22					

12155 LOC: C13 NAME: PIM1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G13-4		T	A1	2	TAG	8	T1	A9-1	1
A12-14		T	B1	1	BIT N	7	F1	B10-2	1
G13-5		T	A2	4	FUNC	5	T2	A9-3	1
A12-16		T	B2	3	BIT N	6	F2	B10-4	1
			A3	16		13	T3		
			B3	15		14	F3		
			A4	18		12	T4		
			B4	17		11	F4		
			C1	24					
			C2	23					
D13-19	C13-19		E1	20					
C13-20		T	E2	19					
			MS	22					

12155 LOC: F12 NAME: PIM2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F13-3		T	A1	2	DATA	8	T1	C9-1	1
C12-4		T	B1	1	BIT N	7	F1	E10-2	1
F13-6		T	A2	4	N+8	5	T2	C9-3	1
C12-6		T	B2	3		6	F2	E10-4	1
F13-8		T	A3	16	N+16	13	T3	C9-15	1
C12-12		T	B3	15		14	F3	E10-16	1
F13-12		T	A4	18	N+24	12	T4	C9-17	1
C12-14		T	B4	17		11	F4	E10-18	1
			C1	24					
			C2	23					
F12-19		T	E1	20					
E12-20	F12-20		E2	19					
			MS	22					

12155 LOC: E12 NAME: PIM3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F13-14		T	A1	2	DATA	8	T1	D9-1	1
C12-16		T	B1	1	BIT N+32	7	F1	C10-2	1
F13-16		T	A2	4	N+40	5	T2	D9-3	1
B12-4		T	B2	3		6	F2	C10-4	1
E13-3		T	A3	16	N+48	13	T3	D9-15	1
B12-6		T	B3	15		14	F3	C10-16	1
E13-6		T	A4	18	N+56	12	T4	D9-17	1
B12-12		T	B4	17		11	F4	C10-18	1
			C1	24					
			C2	23					
E12-19	F12-19		E1	20					
D12-20	E12-20		E2	19					
			MS	22					

12155 LOC: D12 NAME: PIM4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E13-8		T	A1	2	MARK	8	T1	E9-1	1
A12-12		T	B1	1	BIT N	7	F1	A11-2	1
			A2	4		5	T2		
			B2	3		6	F2		
			A3	16		13	T3		
			B3	15		14	F3		
			A4	18		12	T4		
			B4	17		11	F4		
			C1	24					
			C2	23					
D12-19	E12-19		E1	20					
B06-14	D12-20		E2	19					
			MS	22					

12145 LOC: B3 NAME: IB2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D7-13		T	D3	16	DATA N	7	T3	C12-2	1
D7-15		T	D2	15	N+8	8	T2	C12-1	1
D8-4		T	D1	14	N+16	11	T1	C12-22	1
D8-5		T	D0	13	N+24	12	T0	C12-19	1
B4-2		T	W3	2					
B4-1		T	W2	1					
B4-24		T	W1	24					
B4-23		T	W0	23					
B4-3		T	S3	3					
B4-4		T	S2	4					
B4-5		T	S1	5					
B4-6		T	S0	6					
B4-20		T	C1	20	NOTE: PIN 20 FROM WEF PIN T6				
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: B4 NAME: IB3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D8-7		T	D3	16	DATA N+32	7	T3	C12-17	1
D8-11		T	D2	15	N+40	8	T2	B12-2	1
D8-13		T	D1	14	N+48	11	T1	B12-1	1
D8-15		T	D0	13	N+56	12	T0	B12-22	1
B5-2	B3-2		W3	2					
B5-1	B3-1		W2	1					
B5-24	B3-24		W1	24					
B5-23	B3-23		W0	23					
B5-3	B3-3		S3	3					
B5-4	B3-4		S2	4					
B5-5	B3-5		S1	5					
B5-6	B3-6		S0	6					
G11-12	B3-20		C1	20	NOTE: PIN 20 FROM WEF PIN T6				
			C2	19					
			E1	18					
			E2	17					
			MS	22					

NOTES: ⚠ REFER TO CMC 4.0-00

ARDEN HILLS
OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.0-02
7BPH; ⚠ AD112-C

CODE IDENT 34010 D
DWG NO 60458190
REV K
SHEET CMC 4.0-02A 17-8

12145 LOC: B5 NAME: IB4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D6-11		T	D3	16	MARK N	7	T3	A12-22	1
			D2	15			T2		
			D1	14			T1		
			D0	13			T0		
B7-2	B4-2		W3	2					
B7-1	B4-1		W2	1					
B7-24	B4-24		W1	24					
B7-23	B4-23		W0	23					
B6-3	B4-3		S3	3					
B6-6	B4-4		S2	4					
B6-8	B4-5		S1	5					
B6-12	B4-6		S0	6					
G11-18		T	C1	20	NOTE: PIN 20 FROM WEF PIN T7				
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: B7 NAME: IB0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D7-4		T	D3	16	ADRS N	7	T3	B12-19	1
D7-5		T	D2	15	N+8	8	T2	B12-17	1
D7-7		T	D1	14	N+16	11	T1	A12-2	1
D7-11		T	D0	13	N+24	12	T0	A12-1	1
B8-2	B5-2		W3	2					
B8-1	B5-1		W2	1					
B8-24	B5-24		W1	24					
B8-23	B5-23		W0	23					
B8-3	B6-2		S3	3					
B8-4	B6-1		S2	4					
B8-5	B6-20		S1	5					
B8-6	B6-19		S0	6					
B8-20		T	C1	20	NOTE: PIN 20 FROM WEF PIN T5				
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: B8 NAME: IB1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D6-13		T	D3	16	TAG N	7	T3	A12-19	1
D6-15		T	D2	15	FUNC N	8	T2	A12-17	1
			D1	14			T1		
			D0	13			T0		
P2B-01	B7-2		W3	2					
P2B-02	B7-1		W2	1					
P1B-39	B7-24		W1	24					
P1B-40	B7-23		W0	23					
P1B-27	B7-3		S3	3					
P1B-28	B7-4		S2	4					
P1B-23	B7-5		S1	5					
P1B-24	B7-6		S0	6					
G11-11	B7-20		C1	20	NOTE: PIN 20 FROM WEF PIN T5				
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12107 LOC: C12 NAME: PC3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B3-7		T	A1	2	DATA	5	T1	TERM	
C12-24	C12-23		B1	3	BIT N	4	F1	F12-1	1
B3-8		T	A2	1	N+8	7	T2	TERM	
P2B-3	C12-3		B2	24		6	F2	F12-3	1
B3-11		T	A3	22	N+16	11	T3	TERM	
C12-3	C12-20		B3	23		12	F3	F12-15	1
B3-12		T	A4	19	N+24	13	T4	TERM	
C12-23	C12-18		B4	20		14	F4	F12-17	1
B4-7		T	A5	17	N+32	15	T5	TERM	
C12-20	B12-3		B5	18		16	F5	E12-1	1
						8	EQ		

12107 LOC: B12 NAME: PC4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B4-8		T	A1	2	DATA	5	T1	TERM	
C12-18	B12-24		B1	3	BIT N+40	4	F1	E12-3	1
B4-11		T	A2	1	N+48	7	T2	TERM	
B12-3	B12-23		B2	24		6	F2	E12-15	1
B4-12		T	A3	22	N+56	11	T3	TERM	
B12-24	B12-20		B3	23		12	F3	E12-17	1
B7-7		T	A4	19	ADRS	13	T4	A13-2	1
B12-23	B12-18		B4	20	BIT N	14	F4	TERM	
B7-8		T	A5	17	ADRS	15	T5	A13-4	1
B12-20	A12-3		B5	18	BIT N+8	16	F5	PIC-174	
						8	EQ		

12107 LOC: A12 NAME: PC5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B7-11		T	A1	2	ADRS	5	T1	A13-16	1
B12-18	A12-24		B1	3	BIT N+16	4	F1	TERM	
B7-12		T	A2	1	ADRS	7	T2	A13-18	1
A12-3	A12-23		B2	24	BIT N+24	6	F2	PIC-157	
B5-7		T	A3	22	MK	11	T3	TERM	
A12-24	A12-20		B3	23	BIT N	12	F3	D12-1	1
B8-7		T	A4	19	TAG	13	T4	TERM	
A12-23	A12-18		B4	20	BIT N	14	F4	C13-1	1
B8-8		T	A5	17	FUNC	15	T5	TERM	
A12-20	A7-3		B5	18	BIT N	16	F5	C13-3	1
						8	EQ		

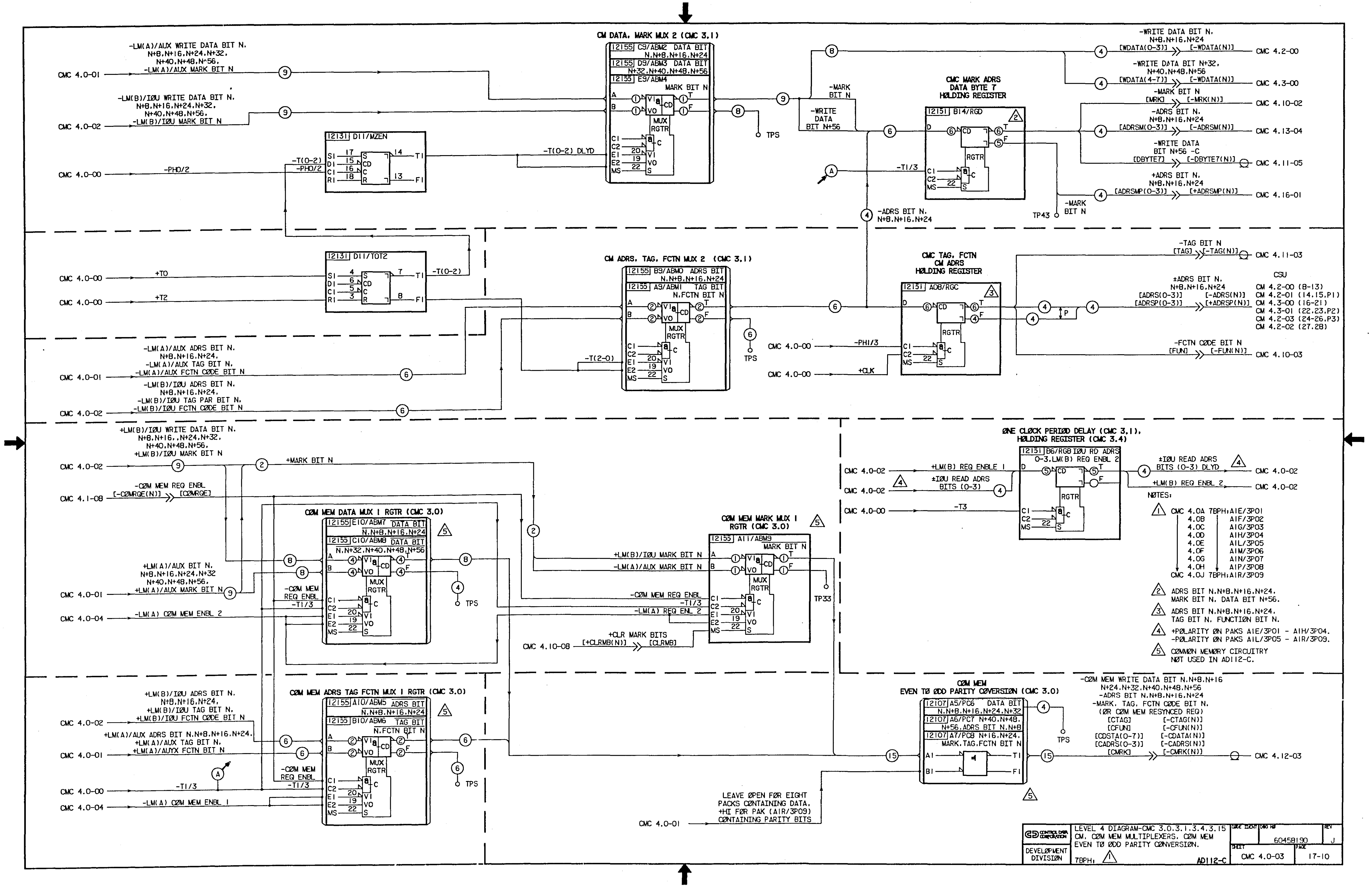
12155 LOC: A13 NAME: IRM

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B12-13		T	A1	2	IOU ADRS	8	T1	TP-39	
			B1	1	BIT N	7	F1	D13-1	1
B12-15		T	A2	4	N+8	5	T2	TERM	
P2B-04	A4-3		B2	3		6	F2	D13-3	1
A12-5		T	A3	16	N+16	13	T3	TP-41	
P2B-7	A4-15		B3	15		14	F3	D13-15	1
A12-7			A4	18	N+24	12	T4	TERM	
P2B-8	A4-17		B4	17		11	F4	D13-17	1
			C1	24					
			C2	23					
P2B-15	A13-19		E1	20					
A13-20		T	E2	19					
			MS	22					

NOTES:
△1 REFER TO CMC 4.0-00

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.0-02
7BPH; △1
AD112-C

DWG NO 60458190
REV J
SHEET CMC 4.0-02B
17-9


CM DATA, MARK MUX 2 (CMC 3.1)
12155 C9/ABM2 DATA BIT N,N+8,N+16,N+24
12155 D9/ABM3 DATA BIT N+32,N+40,N+48,N+56
12155 E9/ABM4 MARK BIT N
-LM(A)/AUX WRITE DATA BIT N, N+8,N+16,N+24,N+32, N+40,N+48,N+56, -LM(A)/AUX MARK BIT N
-LM(B)/IOU WRITE DATA BIT N, N+8,N+16,N+24,N+32, N+40,N+48,N+56, -LM(B)/IOU MARK BIT N
CMC 4.0-01
CMC 4.0-02
CMC 4.0-00
-PHO/2
12131 D11/MZEN
-T(0-2)
-PHO/2
-T(0-2) DLYD
TPS
CMC MARK ADRS DATA BYTE 7 HOLDING REGISTER
12151 B14/RGD
-MARK BIT N
-WRITE DATA BIT N+56
-T1/3
-ADRS BIT N, N+8,N+16,N+24
TP43
-MARK BIT N
-WRITE DATA BIT N, N+8,N+16,N+24 [WDATA(0-3)] [-WDATA(N)] CMC 4.2-00
-WRITE DATA BIT N+32, N+40,N+48,N+56 [WDATA(4-7)] [-WDATA(N)] CMC 4.3-00
-MARK BIT N [MRK] [-MRK(N)] CMC 4.10-02
-ADRS BIT N, N+8,N+16,N+24 [ADRSM(0-3)] [-ADRSM(N)] CMC 4.13-04
-WRITE DATA BIT N+56 -C [DBYTE7] [-DBYTE7(N)] CMC 4.11-05
+ADRS BIT N, N+8,N+16,N+24 [ADRSMP(0-3)] [+ADRSMP(N)] CMC 4.16-01
12131 D11/TOT2
+T0
+T2
-T(0-2)
CM ADRS, TAG, FCTN MUX 2 (CMC 3.1)
12155 B9/ABM0 ADRS BIT N,N+8,N+16,N+24
12155 A9/ABM1 TAG BIT N,FCTN BIT N
-LM(A)/AUX ADRS BIT N, N+8,N+16,N+24, -LM(A)/AUX TAG BIT N, -LM(A)/AUX FCTN CODE BIT N
-LM(B)/IOU ADRS BIT N, N+8,N+16,N+24, -LM(B)/IOU TAG PAR BIT N, -LM(B)/IOU FCTN CODE BIT N
-T(2-0)
CMC TAG, FCTN CM ADRS HOLDING REGISTER
12151 A08/RGC
-PH1/3
+CLK
-TAG BIT N [TAG] [-TAG(N)] CMC 4.11-03
±ADRS BIT N, N+8,N+16,N+24 [ADRS(0-3)] [-ADRS(N)] [ADRSP(0-3)] [+ADRSP(N)]
CSU
CM 4.2-00 (8-13)
CM 4.2-01 (14,15,P1)
CM 4.3-00 (16-21)
CM 4.3-01 (22,23,P2)
CM 4.2-03 (24-26,P3)
CM 4.2-02 (27,28)
-FCTN CODE BIT N [FUN] [-FUN(N)] CMC 4.10-03
+LM(B)/IOU WRITE DATA BIT N, N+8,N+16,,N+24,N+32, N+40,N+48,N+56, +LM(B)/IOU MARK BIT N
+MARK BIT N
-COM MEM REQ ENBL [-COMRQE(N)] [COMRQE]
CMC 4.1-08
COM MEM DATA MUX 1 RGTR (CMC 3.0)
12155 E10/ABM7 DATA BIT N,N+8,N+16,N+24
12155 C10/ABM8 DATA BIT N,N+32,N+40,N+48,N+56
+LM(A)/AUX BIT N, N+8,N+16,N+24,N+32 N+40,N+48,N+56, +LM(A)/AUX MARK BIT N
-LM(A) COM MEM ENBL 2
CMC 4.0-04
-COM MEM REQ ENBL
-T1/3
COM MEM MARK MUX 1 RGTR (CMC 3.0)
12155 A11/ABM9 MARK BIT N
+LM(B)/IOU MARK BIT N
-LM(A)/AUX MARK BIT N
-COM MEM REQ ENBL
-T1/3
-LM(A) REQ ENL 2
TP33
+CLR MARK BITS [+CLRMB(N)] [CLRMB]
CMC 4.10-08
ONE CLOCK PERIOD DELAY (CMC 3.1), HOLDING REGISTER (CMC 3.4)
12151 B6/RGB IOU RD ADRS 0-3,LM(B) REQ ENBL 2
+LM(B) REQ ENBLE 1
±IOU READ ADRS BITS (0-3)
-T3
±IOU READ ADRS BITS (0-3) DLYD CMC 4.0-02
+LM(B) REQ ENBL 2 CMC 4.0-02
COM MEM ADRS TAG FCTN MUX 1 RGTR (CMC 3.0)
12155 A10/ABM5 ADRS BIT N,N+8,N+16,N+24
12155 B10/ABM6 TAG BIT N,FCTN BIT N
+LM(B)/IOU ADRS BIT N, N+8,N+16,N+24, +LM(B)/IOU TAG BIT N, +LM(B)/IOU FCTN CODE BIT N
+LM(A)/AUX ADRS BIT N,N+8,N+16,N+24, +LM(A)/AUX TAG BIT N, +LM(A)/AUYX FCTN BIT N
-T1/3
-LM(A) COM MEM ENBL 1
-COM MEM REQ ENBL
-T1/3
TPS
LEAVE OPEN FOR EIGHT PACKS CONTAINING DATA, +HI FOR PAK (A1R/3P09) CONTAINING PARITY BITS
CMC 4.0-01
COM MEM EVEN TO ODD PARITY CONVERSION (CMC 3.0)
12107 A5/PC6 DATA BIT N,N+8,N+16,N+24,N+32
12107 A6/PC7 N+40,N+48, N+56,ADRS BIT N,N+8
12107 A7/PC8 N+16,N+24, MARK,TAG,FCTN BIT N
-COM MEM WRITE DATA BIT N,N+8,N+16 N+24,N+32,N+40,N+48,N+56 -ADRS BIT N,N+8,N+16,N+24 -MARK, TAG, FCTN CODE BIT N, (OR COM MEM RESYNCED REQ)
[CTAG] [-CTAG(N)]
[CFUN] [-CFUN(N)]
[CDSTA(0-7)] [-CDATA(N)]
[CADRS(0-3)] [-CADRS(N)]
[CMRK] [-CMRK(N)]
CMC 4.12-03

NOTES:

1. CMC 4.0A 7BPH: A1E/3P01
   4.0B A1F/3P02
   4.0C A1G/3P03
   4.0D A1H/3P04
   4.0E A1L/3P05
   4.0F A1M/3P06
   4.0G A1N/3P07
   4.0H A1P/3P08
   CMC 4.0J 7BPH: A1R/3P09
2. ADRS BIT N,N+8,N+16,N+24. MARK BIT N, DATA BIT N+56.
3. ADRS BIT N,N+8,N+16,N+24. TAG BIT N, FUNCTION BIT N.
4. +POLARITY ON PAKS A1E/3P01 - A1H/3P04. -POLARITY ON PAKS A1L/3P05 - A1R/3P09.
5. COMMON MEMORY CIRCUITRY NOT USED IN AD112-C.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.0,3.1,3.4,3.15 CM, COM MEM MULTIPLEXERS, COM MEM EVEN TO ODD PARITY CONVERSION.	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION	7BPH: △1 AD112-C	SHEET CMC 4.0-03	PAGE 17-10	

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12155 LOC: C9 NAME: ABM2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F6-8		T	A1	2	DATA	8	T1	P2B-21	1
F12-8		T	B1	1	BIT N	7	F1	TP-18	
F6-5		T	A2	4	N+8	5	T2	P2B-22	1
F12-5		T	B2	3		6	F2	TP-8	
F6-13		T	A3	16	N+16	13	T3	P1B-11	1
F12-13		T	B3	15		14	F3	TP-13	
F6-12		T	A4	18	N+24	12	T4	P1B-12	1
F12-12		T	B4	17		11	F4	TP-20	
			C1	24					
			C2	23					
D9-19	C9-19		E1	20					
C9-20		T	E2	19					
			MS	22					

12155 LOC: D9 NAME: ABM3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E3-8		T	A1	2	DATA BIT	8	T1	P2B-23	1
E12-8		T	B1	1	N+32	7	F1	TP-17	
E3-5		T	A2	4	N+40	5	T2	P2B-24	1
E12-5		T	B2	3		6	F2	TP-1	
E3-13		T	A3	16	N+48	13	T3	P1B-13	1
E12-13		T	B3	15		14	F3	TP-3	
E3-12		T	A4	18	N+56	12	T4	B14-17	2
E12-12		T	B4	17		11	F4	TP-2	
			C1	24					
			C2	23					
E9-19	D9-19		E1	20					
D9-20	C9-20		E2	19					
			MS	22					

12155 LOC: E9 NAME: ABM4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D3-8		T	A1	2	MARK	8	T1	B14-18	1
D12-8		T	B1	1	BIT N	7	F1	TERM	
			A2	4		5	T2		
			B2	3		6	F2		
			A3	16		13	T3		
			B3	15		14	F3		
			A4	18		12	T4		
			B4	17		11	F4		
			C1	24					
			C2	23					
D11-14	E9-19		E1	20					
E9-20	D9-20		E2	19					
			MS	22					

12155 LOC: B9 NAME: ABM0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B2-8		T	A1	2	ADRS	8	T1	A8-2	2
D13-8		T	B1	1	BIT N	7	F1	TP-22	
B2-5		T	A2	4	N+8	5	T2	A8-1	2
D13-5		T	B2	3		6	F2	TP-21	
B2-13		T	A3	16	N+16	13	T3	A8-20	2
D13-13		T	B3	15		14	F3	TP-25	
B2-12		T	A4	18	N+24	12	T4	A8-19	2
D13-12		T	B4	17		11	F4	TP-24	
			C1	24					
			C2	23					
D11-8	B9-19		E1	20					
B9-20	A9-20		E2	19					
			MS	22					

12155 LOC: A9 NAME: ABM1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A2-8		T	A1	2	TAG	8	T1	A08-18	1
C13-8		T	B1	1	BIT N	7	F1	TP-23	
A2-5		T	A2	4	FUNC	5	T2	A08-17	1
C13-5		T	B2	3	BIT N	6	F2	TP-26	
			A3	16		13	T3		
			B3	15		14	F3		
			A4	18		12	T4		
			B4	17		11	F4		
			C1	24					
			C2	23					
B9-19	A9-19		E1	20					
A9-20		T	E2	19					
			MS	22					

12151 LOC: B14 NAME: RGD

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A8-2		T	D1	2	ADRS	3	T1	P1B-1	1
					BIT N	4	F1	P1A-13	1
A8-1		T	D2	1	N+8	6	T2	P1B-2	1
						5	F2	P1A-15	
A8-20		T	D3	20	N+16	8	T3	P1B-3	1
						7	F3	P1A-17	
A8-19		T	D4	19	N+24	12	T4	P1B-4	1
						11	F4	P1A-18	
E9-8		T	D5	18	MARK	14	T5	P1B-6	1
					BIT N	13	F5	TP-43	
D9-12	P1B-14		D6	17	DATA BIT	16	T6	P2B-26	1
					N+56	15	F6	TP-44	
G10-17		T	C1	24					
			C2	23					
			MS	22					

12151 LOC: A08 NAME: RGC

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B9-8	B14-2		D1	2	ADRS	3	T1	P2A-1	1
					BIT N	4	F1	P2A-2	1
B9-5	B14-1		D2	1	N+8	6	T2	P2A-6	1
						5	F2	P2A-4	1
B9-13	B14-20		D3	20	N+16	8	T3	P2A-7	1
						7	F3	P2A-8	1
B9-12	B14-19		D4	19	N+24	12	T4	P2A-9	1
						11	F4	P2A-10	1
A9-8		T	D5	18	TAG	14	T5	P2B-35	1
					BIT N	13	F5	TERM	
A9-5		T	D6	17	FUNC	16	T6	P1A-11	1
					BIT N	15	F6	TERM	
G10-19		T	C1	24					
C11-24		T	C2	23					
			MS	22					

12155 LOC: E10 NAME: ABM7 △2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F12-7		T	A1	2	DATA	8	T1	A5-2	1
F6-7		T	B1	1	BIT N	7	F1	TERM	
F12-6		T	A2	4	N+8	5	T2	A5-1	1
F6-6		T	B2	3		6	F2	TERM	
F12-14		T	A3	16	N+16	13	T3	A5-22	1
F6-14		T	B3	15		14	F3	TERM	
F12-11		T	A4	18	N+24	12	T4	A5-19	1
F6-11		T	B4	17		11	F4	TERM	
C10-24		T	C1	24					
G10-18	C10-23		C2	23					
G12-16	E10-19		E1	20					
E10-20	C10-20		E2	19					
			MS	22					

12155 LOC: C10 NAME: ABM8 △2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E12-7		T	A1	2	DATA BIT	8	T1	A5-17	1
E3-7		T	B1	1	N+32	7	F1	TP-16	
E12-6		T	A2	4	N+40	5	T2	A6-2	1
E3-6		T	B2	3		6	F2	TP-19	
E12-14		T	A3	16	N+48	13	T3	A6-1	1
E3-14		T	B3	15		14	F3	TP-15	
E12-11		T	A4	18	N+56	12	T4	A6-22	1
E3-11		T	B4	17		11	F4	TP-14	
B10-24	E10-24		C1	24					
E10-23	B10-23		C2	23					
E10-19	C10-19		E1	20					
C10-20	A11-20		E2	19					
			MS	22					

12155 LOC: A11 NAME: ABM9 △2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D12-7		T	A1	2	MARK	8	T1	A7-22	1
D3-7		T	B1	1	BIT N	7	F1	TP-33	
			A2	4		5	T2		
			B2	3		6	F2		
			A3	16		13	T3		
			B3	15		14	F3		
			A4	18		12	T4		
			B4	17		11	F4		
P1B-8	A10-24		C1	24					
A10-23		T	C2	23					
A11-19			E1	20					
C10-19	A11-20	T	E2	19					
P1B-18		T	MS	22					

12151 LOC: B6 NAME: RGB

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B7-3		T	D1	2	IOU RD ADRS	3	T1	B5-3	3
					BIT 0	4	F1	TERM	
B7-4		T	D2	1	BIT 1	6	T2	B5-4	3
						5	F2	TERM	
B7-5		T	D3	20	BIT 2	8	T3	B5-5	3
						7	F3	TERM	
B7-6		T	D4	19	BIT 3	12	T4	B5-6	3
						11	F4	TERM	
P2B-06	D13-20		D5	18	$P3_B$REQ	14	T5	D12-19	
					ENABLE 2	13	F5	TERM	
			D6	17		16	T6		
						15	F6		
G10-7		T	C1	24					
			C2	23					
			MS	22					

12155 LOC: A10 NAME: ABM5 △2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D13-7		T	A1	2	ADRS	8	T1	A6-19	1
B2-7		T	B1	1	BIT N	7	F1	TP-28	
D13-6		T	A2	4	N+8	5	T2	A6-17	1
B2-6		T	B2	3		6	F2	TP-32	
D13-14		T	A3	16	N+16	13	T3	A7-2	1
B2-14		T	B3	15		14	F3	TP-31	
D13-11		T	A4	18	N+24	12	T4	A7-1	1
B2-11		T	B4	17		11	F4	TP-29	
A11-24	B10-24		C1	24					
B10-23	A11-23		C2	23					
A10-19	B10-19		E1	20					
E11-8	A10-20		E2	19					
			MS	22					

12155 LOC: B10 NAME: ABM6 △2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-7		T	A1	2	TAG	8	T1	A7-19	1
A2-7		T	B1	1	BIT N	7	F1	TP-30	
C13-6		T	A2	4	FUNC	5	T2	A7-17	1
A2-6		T	B2	3	BIT N	6	F2	TP-27	
			A3	16		13	T3		
			B3	15		14	F3		
			A4	18		12	T4		
			B4	17		11	F4		
A10-24	C10-24		C1	24					
C10-23	A10-23		C2	23					
B10-19		T	E1	20					
A10-20	B10-20		E2	19					
			MS	22					

12107 LOC: A5 NAME: PC6 △2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E10-8		T	A1	2	DATA	5	T1	P1C-56	
A6-3	A5-24		B1	3	BIT N	4	F1	TP-10	
E10-5		T	A2	1	N+8	7	T2	P1C-51	
A5-3	A5-23		B2	24		6	F2	TERM	
E10-13		T	A3	22	N+16	11	T3	P1C-52	
A5-24	A5-20		B3	23		12	F3	TP-9	
E10-12		T	A4	19	N+24	13	T4	P1C-27	
A5-23	A5-18		B4	20		14	F4	TP-11	
C10-8		T	A5	17	N+32	15	T5	P1C-28	
A5-20	C1-3		B5	18		16	F5	TP-12	
						8	EQ		

12107 LOC: A6 NAME: PC7 △2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C10-5		T	A1	2	DATA BIT	5	T1	P1C-68	
A6-24	A5-3		B1	3	N+40	4	F1	TERM	
C10-13		T	A2	1	N+48	7	T2	P1C-67	
A6-23	A6-3		B2	24		6	F2	TERM	
C10-12		T	A3	22	N+56	11	T3	P1C-63	
A6-20	A6-24		B3	23		12	F3	TERM	
A10-8		T	A4	19	ADRS	13	T4	P1C-79	
A6-18	A6-23		B4	20	BIT N	14	F4	TERM	
A10-5		T	A5	17	ADRS BIT	15	T5	P1C-80	
A7-18	A6-20		B5	18	N+8	16	F5	TERM	
						8	EQ		

12107 LOC: A7 NAME: PC8 △2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A10-13		T	A1	2	ADRS	5	T1	P1C-88	
A12-18	A7-24		B1	3	BIT N+16	4	F1	TERM	
A10-12		T	A2	1	ADRS	7	T2	P1C-84	
A7-3	A7-23		B2	24	BIT N+24	6	F2	TERM	
A11-8		T	A3	22	MARK	11	T3	P1C-83	
A7-24	A7-20		B3	23	BIT N	12	F3	TERM	
B10-8		T	A4	19	TAG	13	T4	P1C-92	
A7-23	A7-18		B4	20	BIT N	14	F4	TERM	
B10-5		T	A5	17	FUNC	15	T5	P1C-87	
A7-20	A6-18		B5	18	BIT N	16	F5	TERM	
						8	EQ		

NOTES:

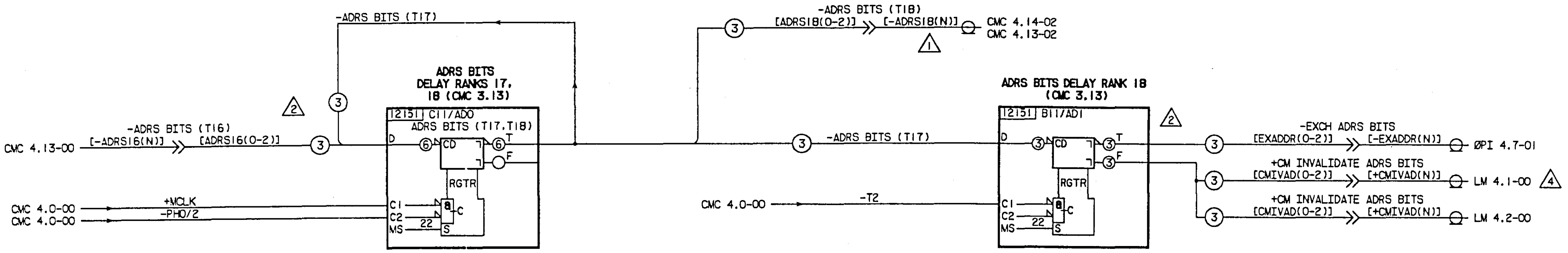
△1 REFER TO CMC 4.0-00

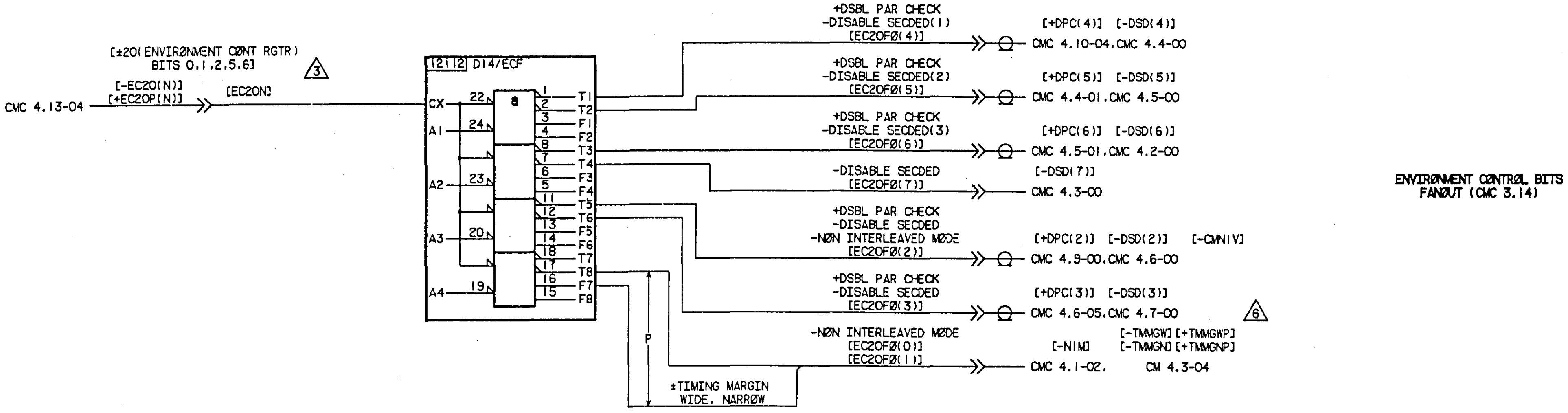
△2 COMMON MEMORY CIRCUITRY
NOT USED IN AD112-C.

ARDEN HILLS OPERATIONS

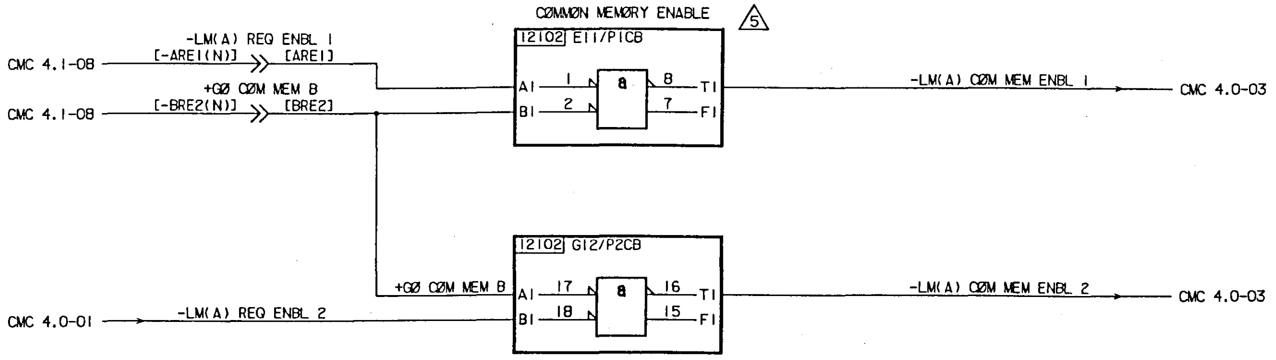
LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.0-03
7BPH; △1 AD112-C

CODE IDENT		DWG NO	REV
34010	D	60458190	J
		SHEET CMC 4.0-03A	17-11





ENVIRØNMENT CØNTRØL BITS FANØUT (CMC 3.14)



(CMC 3.0)

NØTES:

1. ADRS BITS 27.28. PAR BYTES (0-3) (T18) GØ TØ CMC 4.13-02.

2. ADRS BIT DISTRIBUTIØN CHART IS ØN SHEET CMC 4.0-04A.

3. THE ENVIRØNMENT CØNTRØL BITS ARE ASSIGNED AS FØLLØWS:

20BIT0	DISABLE PAR CK	LOC AIR
20BIT1	DISABLE SEC/DED	LOC AIP
20BIT2	NØNINTERLEAVED MØDE	LOC AIL
20BIT5	TIMING MARGIN-W	LOC AIM
20BIT6	TIMING MARGIN-N	LOC AIN

4. SEE ØCCURRENCE CHART ØN PAGE CMC 4.0-ØCD FØR SPECIFIC BIT/DESTINATIØN INFØRMATIØN.

5. CØMMØN MEMØRY CIRCUITRY NØT USED IN AD112-C.

6. NØN-INTERLEAVED MØDE NØT USED IN AD112-C.

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CMC 3.0.3.13.3.14
DELAY RANKS 17.18, ENVIRØNMENT
BIT FANØUT, CØM MEM ENABLE
78PH,
AD112-C

CODE IDENT	DWG NØ	REV
	60458190	J

SHEET	PAGE
CMC 4.0-04	17-12

12151	LOC: C11				NAME: AD0				
SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-4		T	D1	2	ADRS BIT (0) (T17)	3	T1	C11-18	2
						4	F1	TERM	
P1A-6		T	D2	1	ADRS BIT (1) (T17)	6	T2	C11-18	2
						5	F2	TERM	
P1A-8		T	D3	20	ADRS BIT (2) (T17)	8	T3	C11-17	2
						7	F3	TERM	
C11-3	B11-2		D4	19	ADRS BIT (0) (T18)	12	T4	PIC-161	1
						11	F4	TERM	
C11-6	B11-1		D5	18	ADRS BIT (1.) (T18)	14	T5	PIC-181	1
						13	F5	TERM	
C11-8	B11-20		D6	17	ADRS BIT (2) (T18)	16	T6	PIC-182	1
						15	F6	TERM	
F10-2	A08-23		C1	24					
E11-11		T	C2	23					
			MS	22					

12151	LOC: B11				NAME: AD1				
SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C11-19		T	D1	2	ADRS BIT (1) (T17,18)	3	T1	PIC-158	
						4	F1	PIC-109	
C11-18		T	D2	1	ADRS BIT (2) (T17,18)	6	T2	PIC-105	
						5	F2	PIC-110	
C11-17		T	D3	20	ADRS BIT (3) (T17,18)	8	T3	PIC-113	
						7	F3	PIC-106	
			D4				T4		
							F4		
			D5				T5		
							F5		
			D6				T6		
							F6		
F10-8		T	C1	24					
			C2	23					
			MS	22					

A1 CAGE		ADDRESS BIT DISTRIBUTION CHART		
PAC LOCATION		CMC ADDRESS BITS (T17,18)	CORRESPONDING LM CACHE INVALIDATE ADDRESS BITS	CORRESPONDING OPERAND ISSUE EXCHANGE ADDRESS BITS
A1E	3P01	(NU) 6,7, PAR. BYTE 0	NOT USED	NOT USED
A1F	3P02	8,9,10	40,41,42	0,1,2
A1G	3P03	11,12,13	43,44,45	3,4,5
A1H	3P04	14,15, PAR. BYTE 1	46,47,69	6,7,21
A1L	3P05	16,17,18	48,49,50	8,9,10
A1M	3P06	19,20,21	51,52,53	11,12,13
A1N	3P07	22,23, PAR. BYTE 2	54,55,70	14,15,22
A1P	3P08	24,25,26	56,57,58	16,17,18
A1R	3P09	27,28, PAR. BYTE 3	59,60,71	19,20,23

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.0-04

7BPH; ⚠1

AD112-C

DWG NO 60458190		REV J
SHEET CMC 4.0 -04A	17-13	

LEFT ZIF (2)

BIT NAME	I/O	SHEET CMC 4.0-	TYPE	VIRTUAL PIN	REAL PIN
LMTAG	I	01	D	P1E	P2A-39
LMTAGP				1F	40
LMFUN				20	37
LMFUNP				21	38
LMAWD(0)				22	35
LMAWDP(0)				2A	33
LMAWD(1)				23	31
LMAWDP(1)				2B	32
LMAWD(2)				24	29
LMAWDP(2)				2C	30
LMAWD(3)				25	27
LMAWDP(3)				2D	28
LMWD(4)				26	26
LMWDP(4)				2E	24
LMWD(5)				27	21
LMWDP(5)				2F	22
LMWD(6)				28	19
LMWDP(6)				30	20
LMWD(7)				29	17
LMWDP(7)				31	18
LMMRK			↓	32	↓ 15
LMMRKP			D	33	P2A-13
EBWA(0)			Z	4C	P1A-38
(1)				4D	35
↓ (2)				4E	34
EBWA(3)				4F	37
EBRA(0)				50	19
(1)				51	21
↓ (2)		↓		52	20
EBRA(3)		01	↓	53	↓ 22
EREQI		00	Z	54	P1A-14
		01	D	1T	P2A-11
		01	D	UF	P2A-12
AREI		04	Z	57	P1A-26
AREIP	↓	01	↓	58	↓ 07
RFRQEI	I	01	Z	5E	P1A-40
ADRS(0)	O	03	D	80	P2A-01
ADRSP(0)				BF	02
ADRS(1)				81	06
ADRSP(1)				C0	04
ADRS(2)				82	07
ADRSP(2)				C1	08
ADRS(3)			↓	B3	↓ 09
ADRSP(3)		↓	D	C2	P2A-10
FUN		03	Z	B5	P1A-11
BFADR(0)		00		AD	31
(1)				AE	30
(2)				AF	29
↓ (3)				B0	33
BFADR(4)				B1	32
BFADRP(0)				B7	24
(1)				B8	23
↓ (2)	↓	↓		B9	28
BFADRP(3)	O	00		BA	27
MCLRP3	I	02	↓	6F	39
EC2ON	I	04	Z	70	02
EC2OFO(0)	O	↓	Z/D	C9	01
EC2OFO(1)	O	04	D	CA	03
ADRSI6(0)	I	03	Z	71	04
↓ (1)	↓			72	06
ADRSI6(2)	I			73	08
ADRSMP(0)	O			C5	13
(1)				C6	15
↓ (2)				C7	↓ 17
ADRSMP(3)	↓	03	↓	↓ C8	P1A-18
HI	O	00	Z	PDA	P2A-34

ZIF GROUND PINS			
P1A-05	P1A-25	P2A-05	P2A-25
P1A-16	P1A-36	P2A-16	P2A-36

COAX (2)

BIT NAME	I/O	SHEET CMC 4.0-	TYPE	VIRTUAL PIN	REAL PIN
MCK	I	00	C	P4A	P1C-102
PHM				4B	101
EMRK				00	024
ETAG				01	019
EFUN				02	020
EADRS(0)				03	036
(1)				04	032
↓ (2)				05	031
EADRS(3)				06	035
EDATA(0)				07	048
(1)				08	043
(2)				09	044
(3)				0A	047
(4)				0B	059
(5)				0C	060
↓ (6)				0D	055
EDATA(7)				0E	064
IMRK				0F	121
ITAG				10	118
IFUN				11	117
IADRS(0)				12	126
(1)				13	125
↓ (2)				14	122
IADRS(3)				15	129
IDATA(0)				16	134
(1)				17	133
(2)				18	130
(3)				19	137
(4)				1A	142
(5)				1B	141
↓ (6)	↓	↓		1C	138
IDATA(7)	I	00		1D	145
EXADDR(0)	O	03		D4	158
↓ (1)	↓	↓		D5	105
EXADDR(2)	O	03		D6	113
BFADRS(0)	I	00		6C	098
BFADRS(1)	I	00		6D	091
EBCADR(0)	O	01		A5	040
EBCADR(1)		01		A6	039
IBCADR(0)		02		A7	174
IBCADR(1)				A8	157
BAOIP				C4	166
BBCADR(0)				A9	173
BBCADR(1)		↓		↓ AA	178
BREQP		02		PAC	170
ZERO(0)	↓	01	↓	AVV	↓ 003
NOT USED	O	01	C	ADVF	P1C-011
CDATA(0)	O	03	C	P94	P1C-056
(1)				95	051
(2)				96	052
(3)				97	027
(4)				98	028
(5)				99	068
↓ (6)				9A	067
CDATA(7)				9B	063
CADRS(0)				9C	079
(1)				9D	080
↓ (2)				9E	088
CADRS(3)				9F	084
CMRK				A0	083
CTAG		↓		A1	092
CFUN		03		A2	087
EC2OFO(2)		04		CB	185
EC2OFO(3)				CC	186
ADRSI8(0)				D1	161
↓ (1)		↓		D2	181
ADRSI8(2)		04		D3	182
CMIVAD(0)		03		D7	109
↓ (1)	↓	↓	↓	↓ D8	↓ 110
CMIVAD(2)	O	03	C	PD9	P1C-106

RIGHT ZIF (2)

BIT NAME	I/O	SHEET CMC 4.0-	TYPE	VIRTUAL PIN	REAL PIN
LBTAG	I	02	D	P34	P2B-39
LBTAGP				35	40
LBFUN				36	37
LBFUNP				37	38
LBAWD(0)				38	33
LBAWDP(0)				40	34
LBAWD(1)				39	31
LBAWDP(1)				41	32
LBAWD(2)				3A	29
LBAWDP(2)				42	30
LBAWD(3)				3B	27
LBAWDP(3)				43	28
LBWD(4)				3C	19
LBWDP(4)				44	20
LBWD(5)				3D	17
LBWDP(5)				45	18
LBWD(6)				3E	13
LBWDP(6)				46	14
LBWD(7)				3F	11
LBWDP(7)				47	12
LBMRK			↓	48	09
LBMRKP			D	49	10
IBWA(0)			Z	5F	↓ 01
(1)				60	P2B-02
↓ (2)				61	P1B-39
IBWA(3)				62	40
IBRA(0				63	27
(1)				64	28
↓ (2)		↓		65	23
IBRA(3)		02		66	↓ 24
IREQI		00		67	P1B-19
BRE1		02		59	P2B-06
BRE2				5A	P1B-22
RFRQE2		↓		68	P2B-15
CNFLC3		02		69	P1B-26
COMRQE		03		6A	↓ 08
CLRMB	↓	03		6B	P1B-18
PCBIAS	I	01		6E	P2B-03
ADRSM(0)	O	03		86	P1B-01
(1)				87	02
↓ (2)				88	03
ADRSM(3)				89	↓ 04
MRK				8A	P1B-06
WDATA(0)				8C	P2B-21
(1)				8D	P2B-22
(2)				8E	P1B-11
(3)				8F	P1B-12
(4)				90	P2B-23
(5)				91	P2B-24
↓ (6)		↓		92	P1B-13
WDATA(7)		03		93	14
BFADR(5)		00		B2	29
(6)				B3	30
(7)				B4	31
↓ (8)				B5	32
BFADR(9)				B6	33
BFADRP(4)				BB	34
(5)				BC	35
↓ (6)	↓	↓	↓	BD	↓ 37
BFADRP(7)	O	00	Z	BE	P1B-38
REFADR(0)	I	01	C	5B	P2B-04
↓ (1)	↓	↓		5C	07
REFADR(2)	I	01		5D	08
TAG	O	03	↓	↓ 84	↓ 35
DBYTE7	O	03	C	P8B	P2B-26
EC2OFO(4)	O	04	C/Z	PCD	P1B-09
(5)			↓	CE	15
↓ (6)	↓	↓	C/Z	↓ CF	↓ 17
EC2OFO(7)	O	04	Z	PD0	P1B-21

ZIF GROUND PINS			
P1B-05	P1B-25	P2B-05	P2B-25
P1B-16	P1B-36	P2B-16	P2B-36

NOTES:

(1) PAKS NO. 1-4 (+), PAKS NO. 5-9 (-)
A1E-A1H A1L-A1R

(2) CONNECTOR TYPES:

C = COAX
D = DIFFERENTIAL
Z = ZIF TO FOIL ON INTERCONNECT BOARD

CONTROL DATA CORPORATION	LEVEL 4 CONNECTOR CHART SUPPLEMENTAL WIRING INFORMATION	CAGE IDENT	DWG NO 60458190 · REV K
DEVELOPMENT DIVISION	7BPH, AD112-C	SHEET CMC 4.0-CC	PAGE 17-14

				CMC 4.0A		CMC 4.0B		CMC 4.0C		CMC 4.0D		CMC 4.0E		CMC 4.0F		CMC 4.0G		CMC 4.0H		CMC 4.0J	
	MØDULE: 7BPH			ØCCURRENCE 3P01		ØCCURRENCE 3P02		ØCCURRENCE 3P03		ØCCURRENCE 3P04		ØCCURRENCE 3P05		ØCCURRENCE 3P06		ØCCURRENCE 3P07		ØCCURRENCE 3P08		ØCCURRENCE 3P09	
	I/Ø	LØCAL NAME	LØCAL PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE
	I	EMRK	CMC4.0-00	EMRK (0)	AUX	EMRK (1)	AUX	EMRK (2)	AUX	EMRK (3)	AUX	EMRK (4)	AUX	EMRK (5)	AUX	EMRK (6)	AUX	EMRK (7)	AUX	EMRK (8)	AUX
	I	ETAG		ETAG (0)		ETAG (1)		ETAG (2)		ETAG (3)		ETAG (4)		ETAG (5)		ETAG (6)		ETAG (7)		ETAG (8)	
	I	EFUN		EFUN (0)		EFUN (1)		EFUN (2)		EFUN (3)		BIASI		BIASI		BIASI		BIASI		EFUN (8)	
	I	EADRS (0)		EADRS (0)		EADRS (1)		EADRS (2)		EADRS (3)		EADRS (4)	AUX	EADRS (5)	AUX	EADRS (6)	AUX	EADRS (7)	AUX	EADRS (32)	
	I	(1)		(8)		(9)		(10)		(11)		(12)		(13)		(14)		(15)		(33)	
	I	(2)		(16)		(17)		(18)		(19)		(20)		(21)		(22)		(23)		(34)	
	I	(3)		(24)		(25)		(26)		(27)		(28)		(29)		(30)		(31)		(35)	
	I	EDATA (0)		EDATA (0)		EDATA (1)		EDATA (2)		EDATA (3)		EDATA (4)		EDATA (5)		EDATA (6)		EDATA (7)		EDATA (64)	
	I	(1)		(8)		(9)		(10)		(11)		(12)		(13)		(14)		(15)		(65)	
	I	(2)		(16)		(17)		(18)		(19)		(20)		(21)		(22)		(23)		(66)	
	I	(3)		(24)		(25)		(26)		(27)		(28)		(29)		(30)		(31)		(67)	
	I	(4)		(32)		(33)		(34)		(35)		(36)		(37)		(38)		(39)		(68)	
	I	(5)		(40)		(41)		(42)		(43)		(44)		(45)		(46)		(47)		(69)	
	I	(6)		(48)		(49)		(50)		(51)		(52)		(53)		(54)		(55)		(70)	
	I	(7)		(56)		(57)		(58)		(59)		(60)		(61)		(62)		(63)		(71)	
	I	IMRK		IMRK (0)	IØU	IMRK (1)	IØU	IMRK (2)	IØU	IMRK (3)	IØU	IMRK (4)	IØU	IMRK (5)	IØU	IMRK (6)	IØU	IMRK (7)	IØU	IMRK (8)	IØU
	I	ITAG		ITAG (0)		ITAG (1)		ITAG (2)		ITAG (3)		ITAG (4)		ITAG (5)		ITAG (6)		ITAG (7)		ITAG (8)	
	I	IFUN		IFUN (0)		IFUN (1)		IFUN (2)		IFUN (3)		BIASI		BIASI		BIASI		BIASI		IFUN (8)	
	I	IADRS (0)		IADRS (0)		IADRS (1)		IADRS (2)		IADRS (3)		IADRS (4)	IØU	IADRS (5)	IØU	IADRS (6)	IØU	IADRS (7)	IØU	IADRS (32)	
	I	(1)		(8)		(9)		(10)		(11)		(12)		(13)		(14)		(15)		(33)	
	I	(2)		(16)		(17)		(18)		(19)		(20)		(21)		(22)		(23)		(34)	
	I	(3)		(24)		(25)		(26)		(27)		(28)		(29)		(30)		(31)		(35)	
	I	IDATA (0)		IDATA (0)		IDATA (1)		IDATA (2)		IDATA (3)		IDATA (4)		IDATA (5)		IDATA (6)		IDATA (7)		IDATA (64)	
	I	(1)		(8)		(9)		(10)		(11)		(12)		(13)		(14)		(15)		(65)	
	I	(2)		(16)		(17)		(18)		(19)		(20)		(21)		(22)		(23)		(66)	
	I	(3)		(24)		(25)		(26)		(27)		(28)		(29)		(30)		(31)		(67)	
	I	(4)		(32)		(33)		(34)		(35)		(36)		(37)		(38)		(39)		(68)	
	I	(5)		(40)		(41)		(42)		(43)		(44)		(45)		(46)		(47)		(69)	
	I	(6)		(48)		(49)		(50)		(51)		(52)		(53)		(54)		(55)		(70)	
	I	(7)		(56)		(57)		(58)		(59)		(60)		(61)		(62)		(63)		(71)	
A PØRT	I	LMTAG	CMC4.0-01	LMTAG (0)	LM4.3-10	LMTAG (1)	LM4.3-10	LMTAG (2)	LM4.3-10	LMTAG (3)	LM4.3-10	LMTAG (4)	LM4.3-10	LMTAG (5)	LM4.3-10	LMTAG (6)	LM4.3-10	LMTAG (7)	LM4.3-10	LMTAG (8)	LM4.3-10
	I	LMTAGP		LMTAGP (0)		LMTAGP (1)		LMTAGP (2)		LMTAGP (3)		LMTAGP (4)		LMTAGP (5)		LMTAGP (6)		LMTAGP (7)		LMTAGP (8)	
	I	LMFUN		LMFUN (0)	LM4.3-09	LMFUN (1)	LM4.3-09	LMFUN (2)	LM4.3-09	LMFUN (3)	LM4.3-09	BIASI	LM4.3-09	BIASI	LM4.3-09	BIASI	LM4.3-09	BIASI	LM4.3-09	LMFUN (4)	LM4.3-09
	I	LMFUNP		LMFUNP (0)		LMFUNP (1)		LMFUNP (2)		LMFUNP (3)		BIASI		BIASI		BIASI		BIASI		LMFUNP (4)	
	I	LMAWD (0)		LMWD (0)	LM4.5A-01	LMWD (1)	LM4.5A-01	LMWD (2)	LM4.5B-01	LMWD (3)	LM4.5B-01	LMWD (4)	LM4.5C-01	LMWD (5)	LM4.5C-01	LMWD (6)	LM4.5D-01	LMWD (7)	LM4.5D-01	LMWD (64)	LM4.5A-01
	I	(1)		(8)		(9)		(10)	LM4.5A-01	(11)	LM4.5A-01	(12)	LM4.5A-01	(13)	LM4.5A-01	(14)	LM4.5A-01	(15)	LM4.5B-01	(65)	LM4.5B-01
	I	(2)		(16)	LM4.5B-01	(17)	LM4.5B-01	(18)	LM4.5B-01	(19)	LM4.5B-01	(20)	LM4.5B-01	(21)	LM4.5B-01	(22)	LM4.5C-01	(23)	LM4.5C-01	(66)	LM4.6C-01
	I	(3)		(24)	LM4.5C-01	(25)	LM4.5C-01	(26)	LM4.5C-01	(27)	LM4.5C-01	(28)	LM4.5C-01	(29)	LM4.5A-01	(30)	LM4.5A-01	(31)	LM4.5A-01	(67)	LM4.5D-01
	I	LMWD (4)		LMWD (32)	LM4.5A-01	LMWD (33)	LM4.5B-01	LMWD (34)	LM4.5D-01	LMWD (35)	LM4.5D-01	LMWD (36)	LM4.5D-01	LMWD (37)	LM4.5D-01	LMWD (38)	LM4.5D-01	LMWD (39)	LM4.5D-01	LMWD (68)	LM4.5A-01
	I	(5)		(40)	LM4.5B-01	(41)		(42)	LM4.5B-01	(43)	LM4.5C-01	(44)	LM4.5A-01	(45)	LM4.5A-01	(46)	LM4.5A-01	(47)	LM4.5B-01	(69)	LM4.5B-01
	I	(6)		(48)		(49)		(50)	LM4.5C-01	(51)		(52)	LM4.5C-01	(53)	LM4.5D-01	(54)	LM4.5D-01	(55)	LM4.5D-01	(70)	LM4.5C-01
	I	(7)		(56)	LM4.5C-01	(57)	LM4.5C-01	(58)		(59)	LM4.5D-01	(60)	LM4.5D-01	(61)		(62)		(63)		(71)	LM4.5D-01
	I	LMAWDP (0)		LMWDP (0)	LM4.5A-01	LMWDP (1)	LM4.5A-01	LMWDP (2)	LM4.5B-01	LMWDP (3)	LM4.5B-01	LMWDP (4)	LM4.5C-01	LMWDP (5)	LM4.5C-01	LMWDP (6)		LMWDP (7)		LMWDP (64)	LM4.5A-01
	I	(1)		(8)		(9)		(10)	LM4.5A-01	(11)	LM4.5A-01	(12)	LM4.5A-01	(13)	LM4.5A-01	(14)	LM4.5A-01	(15)	LM4.5B-01	(65)	LM4.5B-01
	I	(2)		(16)	LM4.5B-01	(17)	LM4.5B-01	(18)	LM4.5B-01	(19)	LM4.5B-01	(20)	LM4.5B-01	(21)	LM4.5B-01	(22)	LM4.5C-01	(23)	LM4.5C-01	(66)	LM4.5C-01
	I	(3)		(24)	LM4.5C-01	(25)	LM4.5C-01	(26)	LM4.5C-01	(27)	LM4.5C-01	(28)	LM4.5C-01	(29)	LM4.5A-01	(30)	LM4.5A-01	(31)	LM4.5A-01	(67)	LM4.5D-01
	I	LMWDP (4)		LMWDP (32)	LM4.5A-01	LMWDP (33)	LM4.5B-01	LMWDP (34)	LM4.5D-01	LMWDP (35)	LM4.5D-01	LMWDP (36)	LM4.5D-01	LMWDP (37)	LM4.5D-01	LMWDP (38)	LM4.5D-01	LMWDP (39)	LM4.5D-01	LMWDP (68)	LM4.5A-01
	I	(5)		(40)	LM4.5B-01	(41)		(42)	LM4.5B-01	(43)	LM4.5C-01	(44)	LM4.5A-01	(45)	LM4.5A-01	(46)	LM4.5A-01	(47)	LM4.5B-01	(69)	LM4.5B-01
	I	(6)		(48)		(49)		(50)	LM4.5C-01	(51)		(52)	LM4.5C-01	(53)	LM4.5D-01	(54)	LM4.5D-01	(55)	LM4.5D-01	(70)	LM4.5C-01
	I	(7)		(56)	LM4.5C-01	(57)	LM4.5C-01	(58)		(59)	LM4.5D-01	(60)	LM4.5D-01	(61)		(62)		(63)		(71)	LM4.5D-01
	I	LMMRK		LMMRK (0)	LM4.10-06	LMMRK (1)	LM4.10-06	LMMRK (2)	LM4.6A-03	LMMRK (3)	LM4.6A-03	LMMRK (4)	LM4.6A-03	LMMRK (5)	LM4.6B-03	LMMRK (6)	LM4.6B-03	LMMRK (7)	LM4.6B-03	LMMRK (8)	LM4.10-06
	I	LMMRKP		LMMRKP (0)		LMMRKP (1)		LMMRKP (2)		LMMRKP (3)		LMMRKP (4)		LMMRKP (5)		LMMRKP (6)		LMMRKP (7)		LMMRKP (8)	
B PØRT △1	I	LBTAG	CMC4.0-02	LMTAG (0)	LM4.3-10	LMTAG (1)	LM4.3-10	LMTAG (2)	LM4.3-10	LMTAG (3)	LM4.3-10	LMTAG (4)	LM4.3-10	LMTAG (5)	LM4.3-10	LMTAG (6)	LM4.3-10	LMTAG (7)	LM4.3-10	LMTAG (8)	LM4.3-10
	I	LBTAGP		LMTAGP (0)		LMTAGP (1)		LMTAGP (2)		LMTAGP (3)		LMTAGP (4)		LMTAGP (5)		LMTAGP (6)		LMTAGP (7)		LMTAGP (8)	
	I	LBFUN		LMFUN (0)	LM4.3-09	LMFUN (1)	LM4.3-09	LMFUN (2)	LM4.3-09	LMFUN (3)	LM4.3-09	LMREQ	LM4.3-09	BIASI	LM4.3-09	BIASI	LM4.3-09	BIASI	LM4.3-09	LMFUN (8)	LM4.3-09
	I	LBFUNP		LMFUNP (0)		LMFUNP (1)		LMFUNP (2)		LMFUNP (3)		LMREQP		BIASI		BIASI		BIASI		LMFUNP (8)	
	I	LBAWD (0)		LMWD (0)	LM4.5A-01	LMWD (1)	LM4.5A-01	LMWD (2)	LM4.5B-01	LMWD (3)	LM4.5B-01	LMWD (4)	LM4.5C-01	LMWD (5)	LM4.5C-01	LMWD (6)	LM4.5D-01	LMWD (7)	LM4.5D-01	LMWD (64)	LM4.5A-01
	I	(1)		(8)		(9)		(10)	LM4.5A-01	(11)	LM4.5A-01	(12)	LM4.5A-01	(13)	LM4.5A-01	(14)	LM4.5A-01	(15)	LM4.5B-01	(65)	LM4.5B-01
	I	(2)		(16)	LM4.5B-01	(17)	LM4.5B-01	(18)	LM4.5B-01	(19)	LM4.5B-01	(20)	LM4.5B-01	(21)	LM4.5B-01	(22)	LM4.5C-01	(23)	LM4.5C-01	(66)	LM4.5C-01
	I	(3)		(24)	LM4.5C-01	(25)	LM4.5C-01	(26)	LM4.5C-01	(27)	LM4.5C-01	(28)	LM4.5C-01	(29)	LM4.5A-01	(30)	LM4.5A-01	(31)	LM4.5A-01	(67)	LM4.5D-01

NØTES:

△1 SECØND CPU (ØPTIØN).

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN
LEVEL 4 ØCCURRENCE CHART
SUPPLEMENTAL WIRING INFØRMATIØN
7BPH:
AD112-C
CAGE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.0-ØCA
PAGE 17-15

'B' PØRT △1 (rows LBWD (4) to LBMRKP)

			CMC 4.0A		CMC 4.0B		CMC 4.0C	
MØDULE: 7BPH			ØCCURRENCE 3P01		ØCCURRENCE 3P02		ØCCURRENCE 3P03	
I/Ø	LØCAL NAME	LØCAL PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE
I	LBWD (4)	CMC4.0-02	LMWD (32)	LM4.5A-01	LMWD (33)	LM4.5B-01	LMWD (34)	LM4.5D-01
I	(5)	↓	(40)	LM4.5B-01	(41)	LM4.5B-01	(42)	LM4.5B-01
I	(6)	↓	(48)	LM4.5B-01	(49)	LM4.5B-01	(50)	LM4.5C-01
I	(7)	↓	(56)	LM4.5C-01	(57)	LM4.5C-01	(58)	↓
I	LBWDP (0)	↓	LMWDP (0)	LM4.5A-01	LMWDP (1)	LM4.5A-01	LMWDP (2)	LM4.5B-01
I	(1)	↓	(8)	LM4.5A-01	(9)	↓	(10)	LM4.5A-01
I	(2)	↓	(16)	LM4.5B-01	(17)	LM4.5B-01	(18)	LM4.5B-01
I	(3)	↓	(24)	LM4.5C-01	(25)	LM4.5C-01	(26)	LM4.5C-01
I	LBWDP (4)	↓	LMWDP (32)	LM4.5A-01	LMWDP (33)	LM4.5B-01	LMWDP (34)	LM4.5D-01
I	(5)	↓	(40)	LM4.5B-01	(41)	↓	(42)	LM4.5B-01
I	(6)	↓	(48)	LM4.5B-01	(49)	↓	(50)	LM4.5C-01
I	(7)	↓	(56)	LM4.5C-01	(57)	LM4.5C-01	(58)	↓
I	LBMRK	↓	LMMRK (0)	LM4.10-06	LMMRK (1)	LM4.10-06	LMMRK (2)	LM4.6A-03
I	LBMRKP	↓	LMMRKP (0)	LM4.10-06	LMMRKP (1)	↓	LMMRKP (2)	↓
I	MCK	CMC4.0-00	NCLKN (395)	MAC4.2-04	NCLKN (396)	MAC4.2-04	NCLKN (397)	MAC4.2-04
I	PHM	↓	CLKPM (2)	↓	CLKPM (3)	↓	CLKPM (4)	↓
I	EBWA (0)	CMC4.0-01	BFADRP (0)	CMC4.0A-00	BFADRP (1)	CMC4.0A-00	BFADRP (2)	CMC4.0A-00
I	(1)	↓	↓	CMC4.0B-00	↓	CMC4.0B-00	↓	CMC4.0B-00
I	(2)	↓	↓	CMC4.0C-00	↓	CMC4.0C-00	↓	CMC4.0C-00
I	(3)	↓	↓	CMC4.0D-00	↓	CMC4.0D-00	↓	CMC4.0D-00
I	EBRA (0)	↓	↓	CMC4.0E-00	↓	CMC4.0E-00	↓	CMC4.0E-00
I	(1)	↓	↓	CMC4.0F-00	↓	CMC4.0F-00	↓	CMC4.0F-00
I	(2)	↓	↓	CMC4.0G-00	↓	CMC4.0G-00	↓	CMC4.0G-00
I	(3)	↓	↓	CMC4.0H-00	↓	CMC4.0H-00	↓	CMC4.0H-00
I	EREQI	CMC4.0-00	EREQI (1)	CMC4.10-08	EREQI (2)	CMC4.10-08	EREQI (3)	CMC4.10-08
I	AREI	CMC4.0-03	AREI (0)	CMC4.1-08	AREI (1)	CMC4.1-08	AREI (2)	CMC4.1-08
I	AREIP	CMC4.0-01	AREIP (0)	↓	AREIP (1)	↓	AREIP (2)	↓
I	BREI	CMC4.0-02	BREI (0)	↓	BREI (1)	↓	BREI (2)	↓
I	BRE2	↓	BRE2 (0)	↓	BRE2 (1)	↓	BRE2 (2)	↓
I	REFADR (0)	CMC4.0-01	BIASI		BIASI		REFADR10	CMC4.11-07
I	(1)	↓	BIASI		BIASI		BIASI	
I	(2)	↓	REFADR24	CMC4.11-07	REFADR25	CMC4.11-07	REFADR26	CMC4.11-07
I	RFRQEI	↓	RFRQEI (0)	CMC4.1-08	RFRQEI (1)	CMC4.1-08	RFRQEI (2)	CMC4.1-08
I	IBWA (0)	CMC4.0-02	BFADRP (4)	CMC4.0A-00	BFADRP (5)	CMC4.0A-00	BFADRP (6)	CMC4.0A-00
I	(1)	↓	↓	CMC4.0B-00	↓	CMC4.0B-00	↓	CMC4.0B-00
I	(2)	↓	↓	CMC4.0C-00	↓	CMC4.0C-00	↓	CMC4.0C-00
I	(3)	↓	↓	CMC4.0D-00	↓	CMC4.0D-00	↓	CMC4.0D-00
I	IBRA (0)	↓	↓	CMC4.0E-00	↓	CMC4.0E-00	↓	CMC4.0E-00
I	(1)	↓	↓	CMC4.0F-00	↓	CMC4.0F-00	↓	CMC4.0F-00
I	(2)	↓	↓	CMC4.0G-00	↓	CMC4.0G-00	↓	CMC4.0G-00
I	(3)	↓	↓	CMC4.0H-00	↓	CMC4.0H-00	↓	CMC4.0H-00
I	IREQI	CMC4.0-00	IREQI (1)	CMC4.10-08	IREQI (2)	CMC4.10-08	IREQI (3)	CMC4.10-08
I	RFRQE2	CMC4.0-02	RFRQE2 (0)	CMC4.1-08	RFRQE2 (1)	CMC4.1-08	RFRQE2 (2)	CMC4.1-08
I	CNFLC3	↓	CNFLC3 (1)	CMC4.1-06	CNFLC3 (2)	CMC4.1-06	CNFLC3 (3)	CMC4.1-06
I	CØMRQE	CMC4.0-03	CØMRQE (0)	CMC4.1-08	CØMRQE (1)	CMC4.1-08	CØMRQE (2)	CMC4.1-08
I	CLRMB	↓	CLRMB (0)	CMC4.10-08	CLRMB (1)	CMC4.10-08	CLRMB (2)	CMC4.10-08
I	BFADRS (0)	CMC4.0-00	EBWA (0)	CMC4.10-06	EBWA (1)	CMC4.10-06	EBWA (2)	CMC4.10-06
I	(1)	↓	IBWA (0)	↓	IBWA (1)	↓	IBWA (2)	↓
I	PCBIAS	CMC4.0-01	BIASI		BIASI		BIASI	
I	MCLRP3	CMC4.0-02	BIASI		BIASI		BIASI	
I	EC2ON	CMC4.0-04	BIASI		BIASI		BIASI	
I	ADRS16 (0)	CMC4.0-03	ADRS16 (6)	CMC4.13-00	ADRS16 (8)	CMC4.13-00	ADRS16 (11)	CMC4.13-00
I	(1)	↓	(7)	↓	(9)	↓	(12)	↓
I	(2)	↓	(32)	↓	(10)	↓	(13)	↓
Ø	ADRS (0)	↓	NU		NU		NU	
Ø	(1)	↓	ADRS (8)	CM4.2-02	ADRS (9)	CM4.2-02	ADRS (10)	CM4.2-02
Ø	(2)	↓	(16)	↓	(17)	↓	(18)	↓
Ø	(3)	↓	(24)	↓	(25)	↓	(26)	↓

			CMC 4.0D		CMC 4.0E		CMC 4.0F	
MØDULE: 7BPH			ØCCURRENCE 3P04		ØCCURRENCE 3P05		ØCCURRENCE 3P06	
I/Ø	LØCAL NAME	LØCAL PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE
I	LBWD (4)	CMC4.0-02	LMWD (35)	LM4.5D-01	LMWD (36)	LM4.5D-01	LMWD (37)	LM4.5D-01
I	(5)	↓	(43)	LM4.5C-01	(44)	LM4.5A-01	(45)	LM4.5A-01
I	(6)	↓	(51)	↓	(52)	LM4.5C-01	(53)	LM4.5D-01
I	(7)	↓	(59)	LM4.5D-01	(60)	LM4.5D-01	(61)	↓
I	LBWDP (0)	↓	LMWDP (3)	LM4.5B-01	LMWDP (4)	LM4.5C-01	LMWDP (5)	LM4.5C-01
I	(1)	↓	(11)	LM4.5A-01	(12)	LM4.5A-01	(13)	LM4.5A-01
I	(2)	↓	(19)	LM4.5B-01	(20)	LM4.5B-01	(21)	LM4.5B-01
I	(3)	↓	(27)	LM4.5C-01	(28)	LM4.5C-01	(29)	LM4.5A-01
I	LBWDP (4)	↓	LMWDP (35)	LM4.5D-01	LMWDP (36)	LM4.5D-01	LMWDP (37)	LM4.5D-01
I	(5)	↓	(43)	LM4.5C-01	(44)	LM4.5A-01	(45)	LM4.5A-01
I	(6)	↓	(51)	↓	(52)	LM4.5C-01	(53)	LM4.5D-01
I	(7)	↓	(59)	LM4.5D-01	(60)	LM4.5D-01	(61)	↓
I	LBMRK	↓	LMMRK (3)	LM4.6A-03	LMMRK (4)	LM4.6A-03	LMMRK (5)	LM4.6B-03
I	LBMRKP	↓	LMMRKP (3)	↓	LMMRKP (4)	↓	LMMRKP (5)	↓
I	MCK	CMC4.0-00	NCLKN (398)	MAC4.2-04	NCLKN (405)	MAC4.2-04	NCLKN (406)	MAC4.2-04
I	PHM	↓	CLKPM (5)	↓	CLKPM (6)	↓	CLKPM (7)	↓
I	EBWA (0)	CMC4.0-01	BFADRP (3)	CMC4.0A-00	BFADR (0)	CMC4.0A-00	BFADR (1)	CMC4.0A-00
I	(1)	↓	↓	CMC4.0B-00	↓	CMC4.0B-00	↓	CMC4.0B-00
I	(2)	↓	↓	CMC4.0C-00	↓	CMC4.0C-00	↓	CMC4.0C-00
I	(3)	↓	↓	CMC4.0D-00	↓	CMC4.0D-00	↓	CMC4.0D-00
I	EBRA (0)	↓	↓	CMC4.0E-00	↓	CMC4.0E-00	↓	CMC4.0E-00
I	(1)	↓	↓	CMC4.0F-00	↓	CMC4.0F-00	↓	CMC4.0F-00
I	(2)	↓	↓	CMC4.0G-00	↓	CMC4.0G-00	↓	CMC4.0G-00
I	(3)	↓	↓	CMC4.0H-00	↓	CMC4.0H-00	↓	CMC4.0H-00
I	EREQI	CMC4.0-00	EREQI (4)	CMC4.10-08	EREQI (5)	CMC4.10-08	EREQI (6)	CMC4.10-08
I	AREI	CMC4.0-03	AREI (3)	CMC4.1-08	AREI (4)	CMC4.1-08	AREI (5)	CMC4.1-08
I	AREIP	CMC4.0-01	AREIP (3)	↓	AREIP (4)	↓	AREIP (5)	↓
I	BREI	CMC4.0-02	BREI (3)	↓	BREI (4)	↓	BREI (5)	↓
I	BRE2	↓	BRE2 (3)	↓	BRE2 (4)	↓	BRE2 (5)	↓
I	REFADR (0)	CMC4.0-01	REFADR11	CMC4.11-07	BIASI		BIASI	
I	(1)	↓	REFADR19	↓	REFADR20	CMC4.11-07	REFADR21	CMC4.11-07
I	(2)	↓	REFADR27	↓	REFADR28	↓	BIASI	
I	RFRQEI	↓	RFRQEI (3)	CMC4.1-08	RFRQEI (4)	CMC4.1-08	RFRQEI (5)	CMC4.1-08
I	IBWA (0)	CMC4.0-02	BFADRP (7)	CMC4.0A-00	BFADR (5)	CMC4.0-00	BFADR (6)	CMC4.0A-00
I	(1)	↓	↓	CMC4.0B-00	↓	↓	↓	CMC4.0B-00
I	(2)	↓	↓	CMC4.0C-00	↓	↓	↓	CMC4.0C-00
I	(3)	↓	↓	CMC4.0D-00	↓	↓	↓	CMC4.0D-00
I	IBRA (0)	↓	↓	CMC4.0E-00	↓	↓	↓	CMC4.0E-00
I	(1)	↓	↓	CMC4.0F-00	↓	↓	↓	CMC4.0F-00
I	(2)	↓	↓	CMC4.0G-00	↓	↓	↓	CMC4.0G-00
I	(3)	↓	↓	CMC4.0H-00	↓	↓	↓	CMC4.0H-00
I	IREQI	CMC4.0-00	IREQI (4)	CMC4.10-08	IREQI (5)	CMC4.10-08	IREQI (6)	CMC4.10-08
I	RFRQE2	CMC4.0-02	RFRQE2 (3)	CMC4.1-08	RFRQE2 (4)	CMC4.1-08	RFRQE2 (5)	CMC4.1-08
I	CNFLC3	↓	CNFLC3 (4)	CMC4.1-06	BFADR (5)	CMC4.0E-00	BFADR (6)	CMC4.0F-00
I	CØMRQE	CMC4.0-03	CØMRQE (3)	CMC4.1-08	CØMRQE (4)	CMC4.1-08	CØMRQE (5)	CMC4.1-08
I	CLRMB	↓	CLRMB (3)	CMC4.10-08	CLRMB (4)	CMC4.10-08	CLRMB (5)	CMC4.10-08
I	BFADRS (0)	CMC4.0-00	EBWA (3)	CMC4.10-06	EBRA (0)	CMC4.10-06	EBRA (1)	CMC4.10-06
I	(1)	↓	IBWA (3)	↓	IBRA (0)	↓	IBRA (1)	↓
I	PCBIAS	CMC4.0-01	BIASI		BIASI		BIASI	
I	MCLRP3	CMC4.0-02	BIASI		MCLRP3	CMC4.16-05	BIASI	
I	EC2ON	CMC4.0-04	BIASI		EC20 (2)	CMC4.13-04	EC20 (5)	CMC4.13-04
I	ADRS16 (0)	CMC4.0-03	ADRS16 (14)	CMC4.13-00	ADRS16 (16)	CMC4.13-00	ADRS16 (19)	CMC4.13-00
I	(1)	↓	(15)	↓	(17)	↓	(20)	↓
I	(2)	↓	(33)	↓	(18)	↓	(21)	↓
Ø	ADRS (0)	↓	ADRS (2)	CM4.2-02	ADRS (3)	CM4.2-02	ADRS (4)	CM4.2-02
Ø	(1)	↓	(11)	↓	(12)	↓	(13)	↓
Ø	(2)	↓	(19)	↓	(20)	↓	(21)	↓
Ø	(3)	↓	(27)	↓	(28)	↓	NU	

			CMC 4.0G		CMC 4.0H		CMC 4.0J	
MØDULE: 7BPH			ØCCURRENCE 3P07		ØCCURRENCE 3P08		ØCCURRENCE 3P08	
I/Ø	LØCAL NAME	LØCAL PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE
I	LBWD (4)	CMC4.0-02	LMWD (38)	LM4.5D-01	LMWD (39)	LM4.5D-01	LMWD (68)	LM4.5A-01
I	(5)	↓	(46)	LM4.5A-01	(47)	LM4.5B-01	(69)	LM4.5B-01
I	(6)	↓	(54)	LM4.5D-01	(55)	LM4.5D-01	(70)	LM4.5C-01
I	(7)	↓	(62)	↓	(63)	↓	(71)	LM4.5D-01
I	LBWDP (0)	↓	LMWDP (6)	↓	LMWDP (7)	↓	LMWDP (64)	LM4.5A-01
I	(1)	↓	(14)	LM4.5A-01	(15)	LM4.5B-01	(65)	LM4.5B-01
I	(2)	↓	(22)	LM4.5C-01	(23)	LM4.5C-01	(66)	LM4.5C-01
I	(3)	↓	(30)	LM4.5A-01	(31)	LM4.5A-01	(67)	LM4.5D-01
I	LBWDP (4)	↓	LMWDP (38)	LM4.5D-01	LMWDP (39)	LM4.5D-01	LMWDP (68)	LM4.5A-01
I	(5)	↓	(46)	LM4.5A-01	(47)	LM4.5B-01	(69)	LM4.5B-01
I	(6)	↓	(54)	LM4.5D-01	(55)	LM4.5D-01	(70)	LM4.5C-01
I	(7)	↓	(62)	↓	(63)	↓	(71)	LM4.5D-01
I	LBMRK	↓	LMMRK (6)	LM4.6B-03	LMMRK (7)	LM4.6B-03	LMMRK (8)	LM4.10-06
I	LBMRKP	↓	LMMRKP (6)	↓	LMMRKP (7)	↓	LMMRKP (8)	↓
I	MCK	CMC4.0-00	NCLKN (407)	MAC4.2-04	NCLKN (408)	MAC4.3-04	NCLKN (409)	MAC4.2-04
I	PHM	↓	CLKPM (28)	MAC4.3-04	CLKPM (29)	↓	CLKPM (30)	MAC4.3-04
I	EBWA (0)	CMC4.0-01	BFADR (2)	CMC4.0A-00	BFADR (3)	CMC4.0A-00	BFADR (3)	CMC4.0A-00
I	(1)	↓	↓	CMC4.0B-00	↓	CMC4.0B-00	↓	CMC4.0B-00
I	(2)	↓	↓	CMC4.0C-00	↓	CMC4.0C-00	↓	CMC4.0C-00
I	(3)	↓	↓	CMC4.0D-00	↓	CMC4.0D-00	↓	CMC4.0D-00
I	EBRA (0)	↓	↓	CMC4.0E-00	↓	CMC4.0E-00	↓	CMC4.0E-00
I	(1)	↓	↓	CMC4.0F-00	↓	CMC4.0F-00	↓	CMC4.0F-00
I	(2)	↓	↓	CMC4.0G-00	↓	CMC4.0G-00	↓	CMC4.0G-00
I	(3)	↓	↓	CMC4.0H-00	↓	CMC4.0H-00	↓	CMC4.0H-00
I	EREQI	CMC4.0-00	EREQI (7)	CMC4.10-08	EREQI (8)	CMC4.10-08	EREQI (9)	CMC4.10-08
I	AREI	CMC4.0-03	AREI (6)	CMC4.1-08	AREI (7)	CMC4.1-08	AREI (8)	CMC4.1-08
I	AREIP	CMC4.0-01	AREIP (6)	↓	AREIP (7)	↓	AREIP (8)	↓
I	BREI	CMC4.0-02	BREI (6)	↓	BREI (7)	↓	BREI (8)	↓
I	BRE2	↓	BRE2 (6)	↓	BRE2 (7)	↓	BRE2 (8)	↓
I	REFADR (0)	CMC4.0-01	BIASI		BIASI		REFADR (33)	CMC4.11-07
I	(1)	↓	REFADR22	CMC4.11-07	REFADR23	CMC4.11-07	(34)	↓
I	(2)	↓	BIASI		BIASI		(35)	↓
I	RFRQEI	↓	RFRQEI (6)	CMC4.1-08	RFRQEI (7)	CMC4.1-08	RFRQEI (8)	CMC4.1-08
I	IBWA (0)	CMC4.0-02	BFADR (7)	CMC4.0A-00	BFADR (8)	CMC4.0A-00	BFADR (9)	CMC4.0A-00
I	(1)	↓	↓	CMC4.0B-00	↓	CMC4.0B-00	↓	CMC4.0B-00
I	(2)	↓	↓	CMC4.0C-00	↓	CMC4.0C-00	↓	CMC4.0C-00
I	(3)	↓	↓	CMC4.0D-00	↓	CMC4.0D-00	↓	CMC4.0D-00
I	IBRA (0)	↓	↓	CMC4.0E-00	↓	CMC4.0E-00	↓	CMC4.0E-00
I	(1)	↓	↓	CMC4.0F-00	↓	CMC4.0F-00	↓	CMC4.0F-00
I	(2)	↓	↓	CMC4.0G-00	↓	CMC4.0G-00	↓	CMC4.0G-00
I	(3)	↓	↓	CMC4.0H-00	↓	CMC4.0H-00	↓	CMC4.0H-00
I	IREQI	CMC4.0-00	IREQI (7)	CMC4.10-08	IREQI (8)	CMC4.10-08	IREQI (9)	CMC4.10-08
I	RFRQE2	CMC4.0-02	RFRQE2 (6)	CMC4.1-08	RFRQE2 (7)	CMC4.1-08	RFRQE2 (8)	CMC4.1-08
I	CNFLC3	↓	BFADR (7)	CMC4.0G-00	BFADR (8)	CMC4.0H-00	BFADR (9)	CMC4.0J-00
I	CØMRQE	CMC4.0-03	CØMRQE (6)	CMC4.1-08	CØMRQE (7)	CMC4.1-08	CØMRQE (8)	CMC4.1-08
I	CLRMB	↓	CLRMB (6)	CMC4.10-08	CLRMB (7)	CMC4.10-08	CLRMB (8)	CMC4.10-08
I	BFADRS (0)	CMC4.0-00	EBRA (2)	CMC4.10-06	EBRA (3)	CMC4.10-06	BIASI	
I	(1)	↓	IBRA (2)	↓	IBRA (3)	↓	CNFLC3 (0)	CMC4.1-06
I	PCBIAS	CMC4.0-01	BIASI		BIASI		SDSBE (0)	CMC4.7-05
I	MCLRP3	CMC4.0-02	BIASI		BIASI		BIASI	
I	EC2ON	CMC4.0-04	EC20 (6)	CMC4.13-04	EC20 (1)	CMC4.13-04	EC20P (0)	CMC4.13-04
I	ADRS16 (0)	CMC4.0-03	ADRS16 (22)	CMC4.13-00	ADRS16 (24)	CMC4.13-00	ADRS16 (27)	CMC4.13-00
I	(1)	↓	(23)	↓	(25)	↓	(28)	↓
I	(2)	↓	(34)	↓	(26)	↓	(35)	↓
Ø	ADRS (0)	↓	ADRS (5)	CM4.2-02	ADRS (6)	CM4.2-02	ADRS (7)	CM4.2-02
Ø	(1)	↓	(14)	↓	(15)	↓	(33)	↓
Ø	(2)	↓	(22)	↓	(23)	↓	(34)	↓
Ø	(3)	↓	NU		NU		(35)	↓

NØTES:

△1 SECØND CPU (ØPTIØN).

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN
LEVEL 4 ØCCURRENCE CHART
SUPPLEMENTAL WIRING INFØRMATIØN
7BPH:
AD112-C
CAGE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.0-ØCB
PAGE 17-16

			CMC 4.0A		CMC 4.0B		CMC 4.0C		CMC 4.0D		CMC 4.0E		CMC 4.0F		CMC 4.0G		CMC 4.0H		CMC 4.0J	
MØDULE: 7BPH			ØCCURRENCE 3P01		ØCCURRENCE 3P02		ØCCURRENCE 3P03		ØCCURRENCE 3P04		ØCCURRENCE 3P05		ØCCURRENCE 3P06		ØCCURRENCE 3P07		ØCCURRENCE 3P08		ØCCURRENCE 3P09	
I/Ø	LØCAL NAME	LØCAL PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE
Ø	ADRSP (0)	CMC4.0-03	NU		NU		NU		ADRSP (2)	CM4.2-02	ADRSP (3)	CM4.2-02	ADRSP (4)	CM4.2-02	ADRSP (5)	CM4.2-02	ADRSP (6)	CM4.2-02	ADRSP (7)	CM4.2-02
Ø	(1)		ADRSP (8)	CM4.2-02	ADRSP (9)	CM4.2-02	ADRSP (10)	CM4.2-02	(11)		(12)		(13)		(14)		(15)		(33)	
Ø	(2)		(16)		(17)		(18)		(19)		(20)		(21)		(22)		(23)		(34)	
Ø	(3)		(24)		(25)		(26)		(27)		(28)		NU		NU		NU		(35)	CM4.2-03
Ø	MRK		MARK (0)	CMC4.10-02	MARK (1)	CMC4.10-02	MARK (2)	CMC4.10-02	MARK (3)	CMC4.10-02	MARK (4)	CMC4.10-02	MARK (5)	CMC4.10-02	MARK (6)	CMC4.10-02	MARK (7)	CMC4.10-02	MARK (8)	CMC4.10-02
Ø	TAG		TAG (0)	CMC4.11-03	TAG (1)	CMC4.11-03	TAG (2)	CMC4.11-03	TAG (3)	CMC4.11-03	TAG (4)	CMC4.11-03	TAG (5)	CMC4.11-03	TAG (6)	CMC4.11-03	TAG (7)	CMC4.11-03	TAG (8)	CMC4.11-03
Ø	FUN		FUN (0)	CMC4.10-03	FUN (1)	CMC4.10-03	FUN (2)	CMC4.10-03	FUN (3)	CMC4.10-03	NU		NU		NU		NU		FUN (4)	CMC4.10-03
Ø	ADRSM (0)		NU	CMC4.13-04	ADRSM (1)	CMC4.13-04	NU		ADRSM (3)	CMC4.13-04	ADRSM (4)	CMC4.13-04	ADRSM (5)	CMC4.13-04	ADRSM (6)	CMC4.13-04	ADRSM (7)	CMC4.13-04	ADRSM (32)	CMC4.13-04
Ø	(1)		ADRSM (8)		(9)		ADRSM (10)	CMC4.13-04	ADRSM (11)	CMC4.13-04	ADRSM (12)	CMC4.13-04	ADRSM (13)	CMC4.13-04	(14)		(15)		(33)	
Ø	(2)		(16)		(17)		(18)		(19)		(20)		(21)		(22)		(23)		(34)	
Ø	(3)		(24)		(25)		(26)		(27)		(28)		NU		NU		NU		(35)	
Ø	DBYTE7		DBYTE7 (56)	CMC4.11-05	DBYTE7 (57)	CMC4.11-05	DBYTE7 (58)	CMC4.11-05	DBYTE7 (59)	CMC4.11-05	DBYTE7 (60)	CMC4.11-05	DBYTE7 (61)	CMC4.11-05	DBYTE7 (62)	CMC4.11-05	DBYTE7 (63)	CMC4.11-05	DBYTE7 (71)	CMC4.11-05
Ø	WDATA (0)		DATAIN (0)	CMC4.2-00	DATAIN (1)	CMC4.2-00	DATAIN (2)	CMC4.2-00	DATAIN (3)	CMC4.2-00	DATAIN (4)	CMC4.2-00	DATAIN (5)	CMC4.2-00	DATAIN (6)	CMC4.2-00	DATAIN (7)	CMC4.2-00	PARIN (64)	CMC4.2-00
Ø	(1)		(8)		(9)		(10)		(11)		(12)		(13)		(14)		(15)		(65)	
Ø	(2)		(16)		(17)		(18)		(19)		(20)		(21)		(22)		(23)		(66)	
Ø	(3)		(24)		(25)		(26)		(27)		(28)		(29)		(30)		(31)		(67)	
Ø	(4)		(32)	CMC4.3-00	(33)	CMC4.3-00	(34)	CMC4.3-00	(35)	CMC4.3-00	(36)	CMC4.3-00	(37)	CMC4.3-00	(38)	CMC4.3-00	(39)	CMC4.3-00	(68)	CMC4.3-00
Ø	(5)		(40)		(41)		(42)		(43)		(44)		(45)		(46)		(47)		(69)	
Ø	(6)		(48)		(49)		(50)		(51)		(52)		(53)		(54)		(55)		(70)	
Ø	(7)		(56)		(57)		(58)		(59)		(60)		(61)		(62)		(63)		(71)	
Ø	CDATA (0)		CDATA (0)	CMC4.12A-03	CDATA (0)	CMC4.12B-03	CDATA (0)	CMC4.12C-03	CDATA (0)	CMC4.12D-03	CDATA (0)	CMC4.12E-03	CDATA (0)	CMC4.12F-03	CDATA (0)	CMC4.12G-03	CDATA (0)	CMC4.12H-03	CDATA (0)	CMC4.12J-03
Ø	(1)		(1)		(1)		(1)		(1)		(1)		(1)		(1)		(1)		(1)	
Ø	(2)		(2)		(2)		(2)		(2)		(2)		(2)		(2)		(2)		(2)	
Ø	(3)		(3)		(3)		(3)		(3)		(3)		(3)		(3)		(3)		(3)	
Ø	(4)		(4)		(4)		(4)		(4)		(4)		(4)		(4)		(4)		(4)	
Ø	(5)		(5)		(5)		(5)		(5)		(5)		(5)		(5)		(5)		(5)	
Ø	(6)		(6)		(6)		(6)		(6)		(6)		(6)		(6)		(6)		(6)	
Ø	(7)		(7)		(7)		(7)		(7)		(7)		(7)		(7)		(7)		(7)	
Ø	ADRSI8 (0)	CMC4.0-04	ADRSI8 (6)	CMC4.14-02	ADRSI8 (8)	CMC4.14-02	ADRSI8 (11)	CMC4.14-02	ADRSI8 (14)	CMC4.14-02	ADRSI8 (16)	CMC4.14-02	ADRSI8 (19)	CMC4.14-02	ADRSI8 (22)	CMC4.14-02	ADRSI8 (24)	CMC4.14-02	ADRSI8 (27)	CMC4.13-02
Ø	(1)		(7)		(9)		(12)		(15)		(17)		(20)		(23)		(25)		(28)	
Ø	(2)		(32)		(10)		(13)		(33)		(18)		(21)		(34)		(26)		(35)	
Ø	CADRS (0)	CMC4.0-03	NU		NU		CADRS (0)	CMC4.12C-03	CADRS (0)	CMC4.12D-03	CADRS (0)	CMC4.12E-03	CADRS (0)	CMC4.12F-03	CADRS (0)	CMC4.12G-03	CADRS (0)	CMC4.12H-03	CADRS (0)	CMC4.12J-03
Ø	(1)		CADRS (1)	CMC4.12A-03	CADRS (1)	CMC4.12B-03	(1)		(1)		(1)		(1)		(1)		(1)		(1)	
Ø	(2)		(2)		(2)		(2)		(2)		(2)		(2)		(2)		(2)		(2)	
Ø	(3)		(3)		(3)		(3)		(3)		(3)		NU		NU		NU		(3)	
Ø	CMRK		CMRK		CMRK		CMRK		CMRK		CMRK		CMRK	CMC4.12F-03	CMRK	CMC4.12G-03	CMRK	CMC4.12H-03	CMRK	
Ø	CTAG		CTAG		CTAG		CTAG		CTAG		CTAG		CTAG		CTAG		CTAG		CTAG	
Ø	CFUN		CFUNRR		CFUNRR		CFUNRR		CFUNRR		NU		NU		NU		NU		NU	
Ø	EBCADR (0)	CMC4.0-01	NU		NU		NU		NU		EBCADR (0)	CMC4.1-02	EBCADR (1)	CMC4.1-02	EBCADR (2)	CMC4.1-02	NU		NU	
Ø	(1)		NU		NU		EBCADR (3)	CMC4.1-02	EBCADR (4)	CMC4.1-02	(5)		NU		NU		NU		NU	
Ø	IBCADR (0)	CMC4.0-02	NU		NU		NU		NU		IBCADR (0)	CMC4.1-01	IBCADR (1)	CMC4.1-01	IBCADR (2)	CMC4.1-01	NU		NU	
Ø	(1)		NU		NU		IBCADR (3)	CMC4.1-01	IBCADR (4)	CMC4.1-01	(5)		NU		NU		NU		NU	
Ø	BBCADR (0)		NU		NU		NU		NU		BBCADR (0)		BBCADR (1)	CMC4.1-01	BBCADR (2)	CMC4.1-01	NU		NU	
Ø	(1)		NU		NU		BBCADR (3)	CMC4.1-01	BBCADR (4)	CMC4.1-01	(5)		NU		NU		NU		NU	
Ø	BREQ		NU		NU		NU		NU		NU		NU		NU		NU		NU	
Ø	BREQP		NU		NU		NU		NU		BREQP	CMC4.1-06	NU		NU		NU		NU	
Ø	BFADR (0)	CMC4.0-00	EBWA (0)	CMC4.0E-01	EBWA (1)	CMC4.0E-01	EBWA (2)	CMC4.0E-01	EBWA (3)	CMC4.0E-01	EBRA (0)	CMC4.0E-01	EBRA (1)	CMC4.0E-01	EBRA (2)	CMC4.0E-01	EBRA (3)	CMC4.0E-01	NU	
Ø	(1)			CMC4.0F-01		CMC4.0F-01		CMC4.0F-01		CMC4.0F-01		CMC4.0F-01		CMC4.0F-01		CMC4.0F-01		CMC4.0F-01	NU	
Ø	(2)			CMC4.0G-01		CMC4.0G-01		CMC4.0G-01		CMC4.0G-01		CMC4.0G-01		CMC4.0G-01		CMC4.0G-01		CMC4.0G-01	NU	
Ø	(3)			CMC4.0H-01		CMC4.0H-01		CMC4.0H-01		CMC4.0H-01		CMC4.0H-01		CMC4.0H-01		CMC4.0H-01		CMC4.0H-01	NU	
Ø	(4)			CMC4.0J-01		CMC4.0J-01		CMC4.0J-01		CMC4.0J-01		CMC4.0J-01		CMC4.0J-01		CMC4.0J-01		CMC4.0J-01	NU	
Ø	(5)		IBWA (0)	CMC4.0E-02	IBWA (1)	CMC4.0E-02	IBWA (2)	CMC4.0E-02	IBWA (3)	CMC4.0E-02	IBRA (0)	CMC4.0E-02	IBRA (1)	CMC4.0E-02	IBRA (2)	CMC4.0E-02	IBRA (3)	CMC4.0E-02	CNFLC3 (0)	CMC4.0E-02
Ø	(6)			CMC4.0F-02		CMC4.0F-02		CMC4.0F-02		CMC4.0F-02		CMC4.0F-02		CMC4.0F-02		CMC4.0F-02		CMC4.0F-02		CMC4.0F-02
Ø	(7)			CMC4.0G-02		CMC4.0G-02		CMC4.0G-02		CMC4.0G-02		CMC4.0G-02		CMC4.0G-02		CMC4.0G-02		CMC4.0G-02		CMC4.0G-02
Ø	(8)			CMC4.0H-02		CMC4.0H-02		CMC4.0H-02		CMC4.0H-02		CMC4.0H-02		CMC4.0H-02		CMC4.0H-02		CMC4.0H-02		CMC4.0H-02
Ø	(9)			CMC4.0J-02		CMC4.0J-02		CMC4.0J-02		CMC4.0J-02		CMC4.0J-02		CMC4.0J-02		CMC4.0J-02		CMC4.0J-02		CMC4.0J-02
Ø	BFADRP (0)		EBWA (0)	CMC4.0A-01	EBWA (1)	CMC4.0A-01	EBWA (2)	CMC4.0A-01	EBWA (3)	CMC4.0A-01	EBRA (0)	CMC4.0A-01	EBRA (1)	CMC4.0A-01	EBRA (2)	CMC4.0A-01	EBRA (3)	CMC4.0A-01	NU	
Ø	(1)			CMC4.0B-01		CMC4.0B-01		CMC4.0B-01		CMC4.0B-01		CMC4.0B-01		CMC4.0B-01		CMC4.0B-01		CMC4.0B-01	NU	
Ø	(2)			CMC4.0C-01		CMC4.0C-01		CMC4.0C-01		CMC4.0C-01		CMC4.0C-01		CMC4.0C-01		CMC4.0C-01		CMC4.0C-01	NU	
Ø	(3)			CMC4.0D-01		CMC4.0D-01		CMC4.0D-01		CMC4.0D-01		CMC4.0D-01		CMC4.0D-01		CMC4.0D-01		CMC4.0D-01	NU	

CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 ØCCURRENCE CHART
SUPPLEMENTAL WIRING INFØRMATIØN

7BPH:

AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.0-ØCC	17-17

				CMC 4.0A		CMC 4.0B		CMC 4.0C		CMC 4.0D	
	MØDULE: 7BPH			ØCCURRENCE 3P01		ØCCURRENCE 3P02		ØCCURRENCE 3P03		ØCCURRENCE 3P04	
	I/Ø	LØCAL NAME	LØCAL PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE
	Ø	BFADRP (4)	CMC4.0-00	+IBWA (0)	CMC4.0A-02	+IBWA (1)	CMC4.0A-02	IBWA (2)	CMC4.0A-02	+IBWA (3)	CMC4.0A-02
	Ø	(5)			CMC4.0B-02		CMC4.0B-02		CMC4.0B-02		CMC4.0B-02
	Ø	(6)			CMC4.0C-02		CMC4.0C-02		CMC4.0C-02		CMC4.0C-02
	Ø	(7)			CMC4.0D-02		CMC4.0D-02		CMC4.0D-02		CMC4.0D-02
	Ø	BAOI	CMC4.0-02	NU		NU		NU		NU	
	Ø	BAOIP		NU		BAOIP	CMC4.1-06	NU		NU	
	Ø	ADRSMP (0)	CMC4.0-03	NU		NU		ADRSMP (2)	CMC4.16-01	ADRSMP (3)	CMC4.16-01
	Ø	(1)		ADRSMP (8)	CMC4.16-01	ADRSMP (9)	CMC4.16-01	(10)		(11)	
	Ø	(2)		(16)		(17)		(18)		(19)	
	Ø	(3)		(24)		(25)		(26)		(27)	
	Ø	EC20F0 (0)	CMC4.0-04	NU		NU		NU		NU	
	Ø	(1)		NU		NU		NU		NU	
	Ø	(2)		NU		NU		NU		NU	
	Ø	(3)		NU		NU		NU		NU	
	Ø	(4)		NU		NU		NU		NU	
	Ø	(5)		NU		NU		NU		NU	
	Ø	(6)		NU		NU		NU		NU	
	Ø	(7)		NU		NU		NU		NU	
	Ø	EXADDR (0)	CMC4.0-03	NU		EXADDR (0)	ØPI4.7-01	EXADDR (3)	ØPI4.7-01	EXADDR (6)	ØPI4.7-01
△1	Ø	(1)		NU		(1)		(4)		(7)	
	Ø	(2)		NU		(2)		(5)		(21)	
	Ø	CMIVAD (0)		NU		CMIVAD (40)	LM4.1-00	CMIVAD (43)	LM4.1-00	CMIVAD (46)	LM4.1-00
△2	Ø	(1)		NU		(41)		(44)		(47)	
	Ø	(2)		NU		(42)		(45)		(69)	
	Ø	HI		DSBL21	CMC4.14-03	NU		NU		NU	
				DSBL	CMC4.15-03						
	Ø	ZERØ (0)	CMC 4.0-01	ZERØ (1)	NU	ZERØ (2)	NU	ZERØ (3)	NU	ZERØ (4)	NU

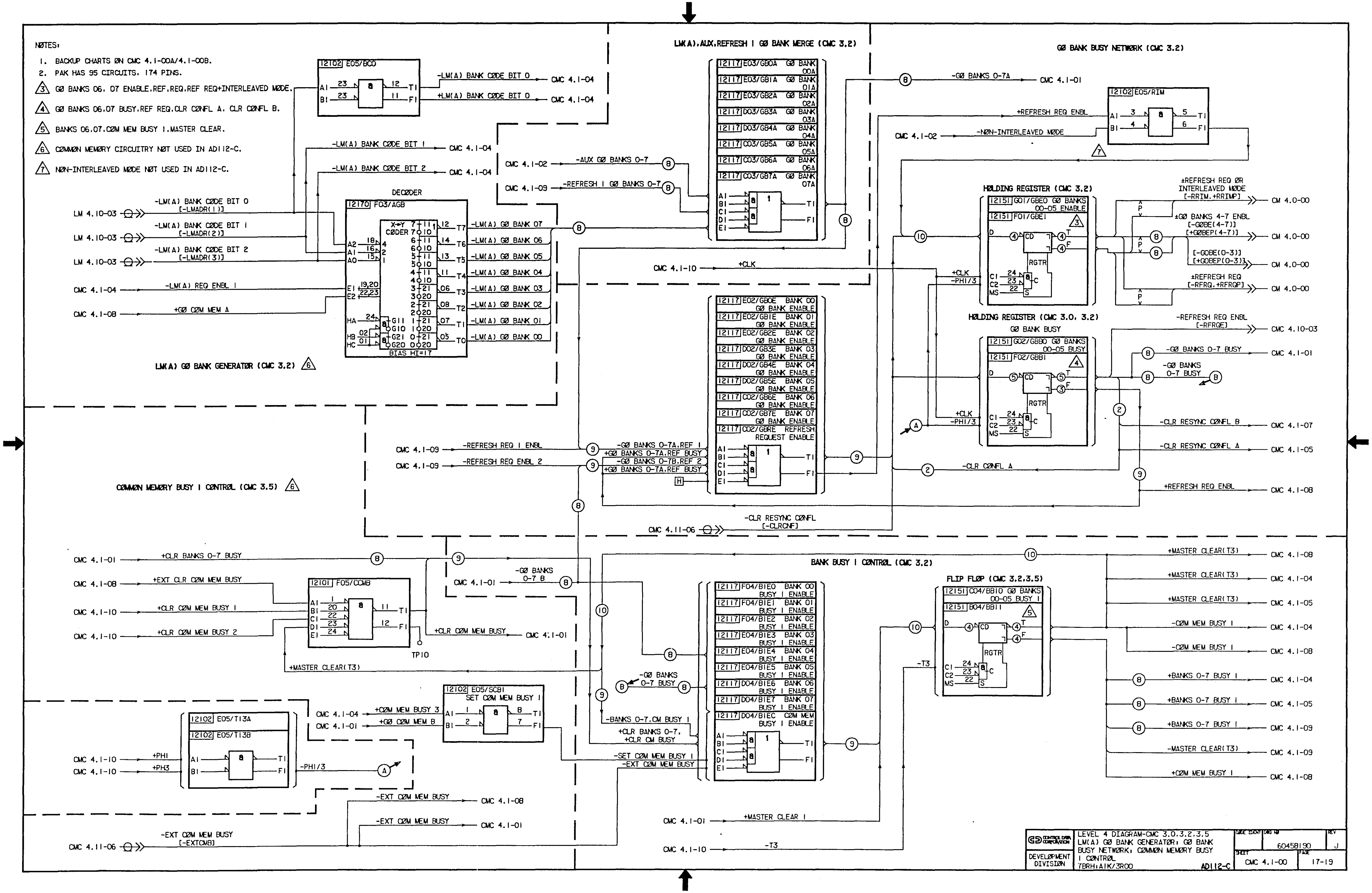
			CMC 4.0E		CMC 4.0F		CMC 4.0G		CMC 4.0H		CMC 4.0J	
			ØCCURRENCE 3P05		ØCCURRENCE 3P06		ØCCURRENCE 3P07		ØCCURRENCE 3P08		ØCCURRENCE 3P09	
	I/Ø	LØCAL NAME	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE
	Ø	BFADRP (4)	+IBRA (0)	CMC4.0A-02	+IBRA (1)	CMC4.0A-02	+IBRA (2)	CMC4.0A-02	+IBRA (3)	CMC4.0A-02	NU	
	Ø	(5)		CMC4.0B-02		CMC4.0B-02		CMC4.0B-02		CMC4.0B-02	NU	
	Ø	(6)		CMC4.0C-02		CMC4.0C-02		CMC4.0C-02		CMC4.0C-02	NU	
	Ø	(7)		CMC4.0D-02		CMC4.0D-02		CMC4.0D-02		CMC4.0D-02	NU	
	Ø	BAOI	NU		NU		NU		NU		NU	
	Ø	BAOIP	NU		NU		NU		NU		NU	
	Ø	ADRSMP (0)	ADRSMP (4)	CMC4.16-01	ADRSMP (5)	CMC4.16-01	ADRSMP (6)	CMC4.16-01	ADRSMP (7)	CMC4.16-01	ADRSMP (32)	CMC4.16-01
	Ø	(1)	(12)		(13)		(14)		(15)		(33)	
	Ø	(2)	(20)		(21)		(22)		(23)		(34)	
	Ø	(3)	(28)		NU		NU		NU		NU	
	Ø	EC20F0 (0)	NIM	CMC4.1-02	TMMGW	CSU	TMMGN	CSU	NU		NU	
	Ø	(1)	NU		TMMGWP		TMMGNP		NU		NU	
	Ø	(2)	CMNIV	LM	NU		NU		DSD (2)	CMC4.6-00	DPC (2)	CMC4.9-00
	Ø	(3)	NU		NU		NU		(3)	CMC4.7-00	(3)	CMC4.6-05
	Ø	(4)	NU		NU		NU		(4)	CMC4.4-00	(4)	CMC4.10-04
	Ø	(5)	NU		NU		NU		(5)	CMC4.5-00	(5)	CMC4.4-01
	Ø	(6)	NU		NU		NU		(6)	CMC4.2-00	(6)	CMC4.5-01
	Ø	(7)	NU		NU		NU		(7)	CMC4.3-00	NU	
	Ø	EXADDR (0)	EXADDR (8)	ØPI4.7-01	EXADDR (11)	ØPI4.7-01	EXADDR (14)	ØPI4.7-01	EXADDR (16)	ØPI4.7-01	EXADDR (19)	ØPI4.7-01
△1	Ø	(1)	(9)		(12)		(15)		(17)		(20)	
	Ø	(2)	(10)		(13)		(22)		(18)		(23)	
	Ø	CMIVAD (0)	CMIVAD (48)	LM4.2-00	CMIVAD (51)	LM4.2-00	CMIVAD (54)	LM4.2-00	CMIVAD (56)	LM4.2-00	CMIVAD (59)	LM4.2-00
△2	Ø	(1)	(49)		(52)		(55)		(57)		(60)	
	Ø	(2)	(50)		(53)		(70)		(58)		(71)	
	Ø	HI	NU		NU		NU		NU		NU	
	Ø	ZERØ (0)	ZERØ (5)	NU	ZERØ (6)	NU	ZERØ (7)	NU	ZERØ (8)	NU	ZERØ (9)	NU

NØTES:

△1 EXADDR BITS NØT USED IN AD113-A.

△2 CMIVAD BITS NØT USED IN AD113-A.

CONTROL DATA CORPORATION	LEVEL 4 ØCCURRENCE CHART SUPPLEMENTAL WIRING INFØRMATIØN	CODE IDENT	DWG NO	REV
			60458190	J
DEVELØPMENT DIVISIØN	7BPH: AD112-C	SHEET	CMC 4.0-ØCD	PAGE 17-18


LM(A),AUX,REFRESH I G0 BANK MERGE (CMC 3.2)
G0 BANK BUSY NETWORK (CMC 3.2)
LM(A) G0 BANK GENERATOR (CMC 3.2) 6
COMMON MEMORY BUSY I CONTROL (CMC 3.5) 6
BANK BUSY I CONTROL (CMC 3.2)
HOLDING REGISTER (CMC 3.2)
HOLDING REGISTER (CMC 3.0, 3.2)
G0 BANK BUSY
FLIP FLOP (CMC 3.2,3.5)
DECODER
12102 E05/BCO
12170 F03/AGB
12102 E05/RIM
12151 G01/GBE0 G0 BANKS 00-05 ENABLE
12151 F01/GBE1
12151 G02/GBB0 G0 BANKS 00-05 BUSY
12151 F02/GBB1
12151 C04/BB10 G0 BANKS 00-05 BUSY I
12151 B04/BB11
12101 F05/CCMB
12102 E05/SCB1 SET COM MEM BUSY I
12102 E05/T13A
12102 E05/T13B
12117 E03/GB0A G0 BANK 00A
12117 E03/GB1A G0 BANK 01A
12117 E03/GB2A G0 BANK 02A
12117 D03/GB3A G0 BANK 03A
12117 D03/GB4A G0 BANK 04A
12117 C03/GB5A G0 BANK 05A
12117 C03/GB6A G0 BANK 06A
12117 C03/GB7A G0 BANK 07A
12117 E02/GB0E BANK 00 G0 BANK ENABLE
12117 E02/GB1E BANK 01 G0 BANK ENABLE
12117 E02/GB2E BANK 02 G0 BANK ENABLE
12117 D02/GB3E BANK 03 G0 BANK ENABLE
12117 D02/GB4E BANK 04 G0 BANK ENABLE
12117 D02/GB5E BANK 05 G0 BANK ENABLE
12117 C02/GB6E BANK 06 G0 BANK ENABLE
12117 C02/GB7E BANK 07 G0 BANK ENABLE
12117 C02/GBRE REFRESH REQUEST ENABLE
12117 F04/B1E0 BANK 00 BUSY I ENABLE
12117 F04/B1E1 BANK 01 BUSY I ENABLE
12117 F04/B1E2 BANK 02 BUSY I ENABLE
12117 E04/B1E3 BANK 03 BUSY I ENABLE
12117 E04/B1E4 BANK 04 BUSY I ENABLE
12117 E04/B1E5 BANK 05 BUSY I ENABLE
12117 D04/B1E6 BANK 06 BUSY I ENABLE
12117 D04/B1E7 BANK 07 BUSY I ENABLE
12117 D04/B1EC COM MEM BUSY I ENABLE
-LM(A) BANK CODE BIT 0 → CMC 4.1-04
+LM(A) BANK CODE BIT 0 → CMC 4.1-04
-LM(A) BANK CODE BIT 1 → CMC 4.1-04
-LM(A) BANK CODE BIT 2 → CMC 4.1-04
LM 4.10-03 -LM(A) BANK CODE BIT 0 [-LMADR(1)]
LM 4.10-03 -LM(A) BANK CODE BIT 1 [-LMADR(2)]
LM 4.10-03 -LM(A) BANK CODE BIT 2 [-LMADR(3)]
CMC 4.1-04 -LM(A) REQ ENBL I
CMC 4.1-08 +G0 COM MEM A
-LM(A) G0 BANK 07
-LM(A) G0 BANK 06
-LM(A) G0 BANK 05
-LM(A) G0 BANK 04
-LM(A) G0 BANK 03
-LM(A) G0 BANK 02
-LM(A) G0 BANK 01
-LM(A) G0 BANK 00
X→Y CODER
BIAS HI=17
CMC 4.1-02 -AUX G0 BANKS 0-7
CMC 4.1-09 -REFRESH I G0 BANKS 0-7
CMC 4.1-10 +CLK
-G0 BANKS 0-7A → CMC 4.1-01
+REFRESH REQ ENBL
CMC 4.1-02 -NON-INTERLEAVED MODE
±REFRESH REQ OR INTERLEAVED MODE [-RRIM,+RRIMP] → CM 4.0-00
±G0 BANKS 4-7 ENBL [-GOBE(4-7)] [+GOBEP(4-7)] → CM 4.0-00
[-GOBE(0-3)] [+GOBEP(0-3)] → CM 4.0-00
±REFRESH REQ [-RFRQ,+RFRQP] → CM 4.0-00
-REFRESH REQ ENBL [-RFRQE] → CMC 4.10-03
-G0 BANKS 0-7 BUSY → CMC 4.1-01
-G0 BANKS 0-7 BUSY
+CLK
-PHI/3
RGTR
-CLR RESYNC CONFL B → CMC 4.1-07
-CLR RESYNC CONFL A → CMC 4.1-05
-CLR CONFL A
+REFRESH REQ ENBL → CMC 4.1-08
CMC 4.1-09 -REFRESH REQ I ENBL
CMC 4.1-09 -REFRESH REQ ENBL 2
-G0 BANKS 0-7A,REF I
+G0 BANKS 0-7A,REF BUSY
-G0 BANKS 0-7B,REF 2
+G0 BANKS 0-7A,REF BUSY
-CLR RESYNC CONFL [-CLRCNF]
CMC 4.11-06
CMC 4.1-01 +CLR BANKS 0-7 BUSY
CMC 4.1-08 +EXT CLR COM MEM BUSY
CMC 4.1-10 +CLR COM MEM BUSY I
CMC 4.1-10 +CLR COM MEM BUSY 2
+CLR COM MEM BUSY → CMC 4.1-01
TP10
+MASTER CLEAR(T3)
CMC 4.1-01 -G0 BANKS 0-7 B
-G0 BANKS 0-7 BUSY
CMC 4.1-04 +COM MEM BUSY 3
CMC 4.1-01 +G0 COM MEM B
CMC 4.1-10 +PHI
CMC 4.1-10 +PH3
-PHI/3
-BANKS 0-7,CM BUSY I
+CLR BANKS 0-7, +CLR CM BUSY
-SET COM MEM BUSY I
-EXT COM MEM BUSY
-EXT COM MEM BUSY → CMC 4.1-08
-EXT COM MEM BUSY → CMC 4.1-01
CMC 4.11-06 -EXT COM MEM BUSY [-EXTCMB]
CMC 4.1-01 +MASTER CLEAR I
CMC 4.1-10 -T3
+MASTER CLEAR(T3) → CMC 4.1-08
+MASTER CLEAR(T3) → CMC 4.1-04
+MASTER CLEAR(T3) → CMC 4.1-05
-COM MEM BUSY I → CMC 4.1-04
-COM MEM BUSY I → CMC 4.1-08
+BANKS 0-7 BUSY I → CMC 4.1-04
+BANKS 0-7 BUSY I → CMC 4.1-05
+BANKS 0-7 BUSY I → CMC 4.1-09
-MASTER CLEAR(T3) → CMC 4.1-09
+COM MEM BUSY I → CMC 4.1-08

NOTES:

1. BACKUP CHARTS ON CMC 4.1-00A/4.1-00B.
2. PAK HAS 95 CIRCUITS, 174 PINS.

3 G0 BANKS 06, 07 ENABLE,REF,REQ,REF REQ+INTERLEAVED MODE.

4 G0 BANKS 06,07 BUSY,REF REQ,CLR CONFL A, CLR CONFL B.

5 BANKS 06,07,COM MEM BUSY I,MASTER CLEAR.

6 COMMON MEMORY CIRCUITRY NOT USED IN AD112-C.

7 NON-INTERLEAVED MODE NOT USED IN AD112-C.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.0,3.2,3.5 LM(A) G0 BANK GENERATOR, G0 BANK BUSY NETWORK, COMMON MEMORY BUSY I CONTROL	CODE IDENT · DWG NO 60458190	REV J
DEVELOPMENT DIVISION	7BRH;A1K/3R00 AD112-C	SHEET CMC 4.1-00	PAGE 17-19

12117 LOC: E03 NAME: GB0A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E1-5		T	A1	1	GO	11	T1	E2-1	
			B1	2	BANK	12	F1	TERM	
D5-5		T	C1	23	00 A				
			D1	24					
F3-5		T	E1	20					

12117 LOC: E03 NAME: GB1A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E1-7		T	A1	3	GO	7	T1	E2-3	
			B1	4	BANK	8	F1	TERM	
D5-7		T	C1	5	01 A				
			D1	6					
F3-7		T	E1	22					

12117 LOC: E03 NAME: GB2A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E1-8		T	A1	15	GO	14	T1	E2-15	
			B1	16	BANK	13	F1	TERM	
D5-8		T	C1	17	02 A				
			D1	18					
F3-8		T	E1	19					

12117 LOC: D03 NAME: GB3A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E1-6		T	A1	1	GO	11	T1	D2-1	
			B1	2	BANK	12	F1	TERM	
D5-6		T	C1	23	03 A				
			D1	24					
F3-6		T	E1	20					

12117 LOC: D03 NAME: GB4A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E1-11		T	A1	3	GO	7	T1	D2-3	
			B1	4	BANK	8	F1	TERM	
D5-11		T	C1	5	04 A				
			D1	6					
F3-11		T	E1	22					

12117 LOC: C03 NAME: GB5A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E1-13		T	A1	1	GO	11	T1	D2-15	
			B1	2	BANK	12	F1	TERM	
D5-13		T	C1	23	05 A				
			D1	24					
F3-13		T	E1	20					

12117 LOC: C03 NAME: GB6A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E1-14		T	A1	3	GO	7	T1	C2-1	
			B1	4	BANK	8	F1	TERM	
D5-14		T	C1	5	06 A				
			D1	6					
F3-14		T	E1	22					

12117 LOC: C03 NAME: GB7A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E1-12		T	A1	15	GO	14	T1	C2-3	
			B1	16	BANK	13	F1	TERM	
D5-12		T	C1	17	07 A				
			D1	18					
F3-12		T	E1	19					

12117 LOC: E02 NAME: GB0E

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E3-11	G6-24		A1	1	BANK	11	T1	G2-20	
G2-7	E2-24		B1	2	00	12	F1	TERM	
F4-24		T	C1	23	GO				
E2-2		T	D1	24	BANK				
E2-19	E2-22		E1	20	ENABLE				

12117 LOC: E02 NAME: GB1E

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E3-7	G6-6		A1	3	BANK	7	T1	G2-1	
G2-5	E2-6		B1	4	01	8	F1	TERM	
F4-6		T	C1	5	GO				
E2-4		T	D1	6	BANK				
E2-20			E1	22	ENABLE				

12117 LOC: E02 NAME: GB2E

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E3-14	G6-18		A1	15	BANK	14	T1	G2-19	
G2-11	E2-18		B1	16	02	13	F1	TERM	
F4-18		T	C1	17	GO				
E2-16		T	D1	18	BANK				
C2-19	E2-20		E1	19	ENABLE				

12117 LOC: D02 NAME: GB3E

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D3-11	F6-24		A1	1	BANK	11	T1	G2-18	
G2-13	D2-24		B1	2	03	12	F1	TERM	
E4-24		T	C1	23	GO				
D2-2		T	D1	24	BANK				
D2-19	D2-22		E1	20	ENABLE				

12117 LOC: D02 NAME: GB4E

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D3-7	F6-6		A1	3	BANK	7	T1	G2-17	
G2-15	D2-6		B1	4	04	8	F1	TERM	
E4-6		T	C1	5	GO				
D2-4		T	D1	6	BANK				
D2-20	E2-19		E1	22	ENABLE				

12117 LOC: D02 NAME: GB5E

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C3-11	F6-18		A1	15	BANK	14	T1	G2-2	
G2-4	D2-18		B1	16	05	13	F1	TERM	
E4-18		T	C1	17	GO				
D2-16		T	D1	18	BANK				
C2-22	D2-20		E1	19	ENABLE				

12117 LOC: C02 NAME: GB6E

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C3-7	E7-24		A1	1	BANK	11	T1	F2-1	
F2-5	C2-24		B1	2	06	12	F1	TERM	
D4-24		T	C1	23	GO				
C2-2		T	D1	24	BANK				
C2-19	C2-22		E1	20	ENABLE				

12117 LOC: C02 NAME: GB7E

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C3-14	E7-6		A1	3	BANK	7	T1	F2-18	
F2-13	C2-6		B1	4	07	8	F1	TERM	
D4-6		T	C1	5	GO				
C2-4		T	D1	6	BANK				
C2-20	D2-19		E1	22	ENABLE				

12117 LOC: C02 NAME: GBRE

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C12-13	D1-22		A1	15	REFR	14	T1	F2-17	
F2-15	C2-18		B1	16	GO	13	F1	E5-3	
A02-11	E14-22		C1	17	BANK				
C2-16	A02-05		D1	18	ENABLE				
HI			E1	19					

12117 LOC: F04 NAME: BIE0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C4-3		T	A1	1	BANK	11	T1	C4-2	
G14-6	G6-2		B1	2	00	12	F1	TERM	
			C1	23	BUSY 1				
G8-11	E2-23		D1	24	ENABLE				
G2-8	G6-20		E1	20					

12117 LOC: F04 NAME: BIE1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C4-6		T	A1	3	BANK	7	T1	C4-1	
G14-12	G6-4		B1	4	01	8	F1	TERM	
			C1	5	BUSY 1				
G8-7	E2-5		D1	6	ENABLE				
G2-6	G6-22		E1	22					

12117 LOC: F04 NAME: BIE2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C4-8		T	A1	15	BANK	14	T1	C4-20	
G14-8	G6-16		B1	16	02	13	F1	TERM	
			C1	17	BUSY 1				
G8-14	E2-17		D1	18	ENABLE				
G2-12	G6-19		E1	19					

12117 LOC: E04 NAME: BIE3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C4-12		T	A1	1	BANK	11	T1	C4-19	
G14-14	F6-2		B1	2	03	12	F1	TERM	
			C1	23	BUSY 1				
F8-11	D2-23		D1	24	ENABLE				
G2-14	F6-20		E1	20					

12117 LOC: E04 NAME: BIE4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C4-14		T	A1	3	BANK	7	T1	C4-18	
G14-16	F6-4		B1	4	04	8	F1	TERM	
			C1	5	BUSY 1				
F8-7	D2-5		D1	6	ENABLE				
G2-16	F6-22		E1	22					

12117 LOC: E04 NAME: BIE5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C4-16		T	A1	15	BANK	14	T1	C4-17	
F14-8	F6-16		B1	16	05	13	F1	TERM	
			C1	17	BUSY 1				
F8-14	D2-17		D1	18	ENABLE				
G2-3	F6-19		E1	19					

12117 LOC: D04 NAME: BIE6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B4-3		T	A1	1	BANK	11	T1	B4-2	
F14-6	E7-2		B1	2	06	12	F1	TERM	
			C1	23	BUSY 1				
E8-11	C2-23		D1	24	ENABLE				
F2-6	E7-20		E1	20					

12117 LOC: D04 NAME: BIE7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B4-6		T	A1	3	BANK	7	T1	B4-1	
F14-16	E7-4		B1	4	07	8	F1	TERM	
			C1	5	BUSY 1				
E8-7	C2-5		D1	6	ENABLE				
F02-14	E7-22		E1	22					

12117 LOC: D04 NAME: BIEC ⚠

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B4-8	C6-4		A1	15	COM	14	T1	B4-20	
F5-11	E7-16		B1	16	MEM	13	F1	TERM	
			C1	17	BUSY 1				
E5-7		T	D1	18	ENABLE				
E7-19		T	E1	19					

12102 LOC: E05 NAME: T13A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D6-4	E5-19		A1	17	PH (1,3)	16	T1	TERM	
D6-7	E5-20		B1	18		15	F1	F1-23	

12102 LOC: E05 NAME: T13B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E5-17		T	A1	19	PH (1,3)	13	T1	TERM	
E5-18		T	B1	20		14	F1	F2-23	

12151 LOC: G01 NAME: GBE0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G2-20		T	D1	20	GO	8	T1	P2A-39	
					BANK 00	7	F1	P2A-40	
G2-1		T	D2	1		6	T2	P2A-37	
					01	5	F2	P2A-35	
G2-19		T	D3	19		12	T3	P2A-36	
					02	11	F3	P2A-34	
G2-18		T	D4	18		14	T4	P2A-31	
					03	13	F4	P2A-32	
G2-17		T	D5	17		16	T5	P2A-29	
					04	15	F5	P2A-30	
G2-2		T	D6	2		3	T6	P2A-27	
					05	4	F6	P2A-25	
G2-24		T	C1	24					
F1-23		T	C2	23					
			MS	22					

12151 LOC: F01 NAME: GBE1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F2-1		T	D1	1	GO	6	T1	P2A-26	
					BANK 06	5	F1	P2A-24	
F2-18		T	D2	18	GO	14	T2	P2A-21	
					BANK 07	13	F2	P2A-22	
F2-17		T	D3	17	REFR	16	T3	P2A-19	
					REQ	15	F3	P2A-20	
E5-6		T	D4	2	REF REQ	3	T4	P2A-14	
					+INTL MODE	4	F4	P2A-12	
			D5	20		8	T5		
						7	F5		
			D6	19		12	T6		
						11	F6		
F2-24		T	C1	24					
E5-15	G1-23		C2	23					
			MS	22					

NOTES

⚠ COMMON MEMORY CIRCUITRY NOT USED IN AD112-C

2 LOGIC ON SHEET CMC 4 1-00

CONTROL DATA CORPORATION ARDEN HILLS OPERATIONS	LEVEL 4 BACKUP CHART SUPPLEMENTAL WIRING INFORMATION CMC 4.1-00 7BRH; A1K/3R00 AD112-C	CODE IDENT 34010	D	DWG NO 60458190 REV J SHEET CMC 4.1-00A 17-20

12151 LOC: G02 NAME: GBB0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E2-11	G1-20		D1	20	GO	8	T1	F4-20	
					BANK 00	7	F1	E2-2	2
E2-7	G1-1		D2	1		6	T2	F4-22	
					01	5	F2	E2-4	2
E2-14	G1-19		D3	19		12	T3	F4-19	
					02	11	F3	E2-16	2
D2-11	G1-18		D4	18		14	T4	E4-20	
					03	13	F4	D2-2	2
D2-7	G1-17		D5	17		16	T5	E4-22	
					04	15	F5	D2-4	2
D2-14	G1-2		D6	2		3	T6	E4-19	
					05	4	F6	D2-16	2
E6-1	G1-24		C1	24					
F2-23		T	C2	23					
			MS	22					

12151 LOC: F02 NAME: GBB1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C2-11	F1-1		D1	1	GO	6	T1	D4-20	
					BANK 06	5	F1	C2-2	2
C2-7	F1-18		D2	18		14	T2	D4-22	
					07	13	F2	C2-4	2
C2-14	F1-17		D3	17	REFR	16	T3	P2A-10	
					REQ	15	F3	C2-16	2
P1C-24		T	D4	2	CLR	3	T4	F2-19	
					CONFL A	4	F4	TERM	
F2-3	B3-2		D5	19	CLR	12	T5	C12-3	
					CONFL B	11	F5	TERM	
			D6	20		8	T6		
						7	F6		
E6-2	F1-24		C1	24					
E5-14	G2-23		C2	23					
			MS	22					

12151 LOC: C04 NAME: BB10

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F4-11		T	D1	2	BANK 00	3	T1	F4-1	
					BUSY I	4	F1	C5-6	3
F4-7		T	D2	1	01	6	T2	F4-3	
						5	F2	C5-5	3
F4-14		T	D3	20	02	8	T3	F4-15	
						7	F3	C5-4	3
E4-11		T	D4	19	03	12	T4	E4-1	
						11	F4	C5-3	3
E4-7		T	D5	18	04	14	T5	E4-3	
						13	F5	C5-2	3
E4-14		T	D6	17	05	16	T6	E4-15	
						15	F6	C5-1	3
D7-12	B4-24		C1	24					
			C2	23					
			MS	22					

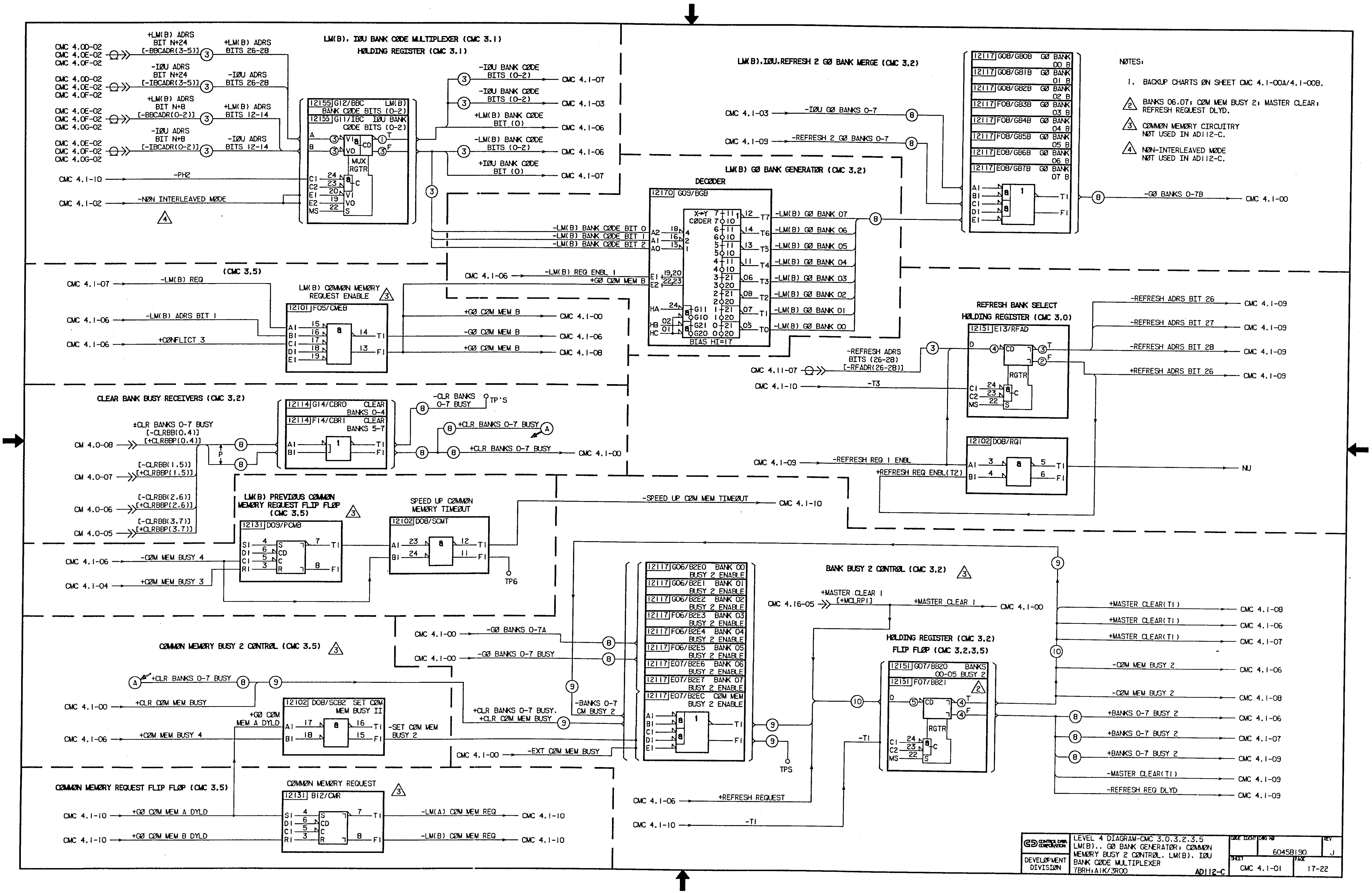
12151 LOC: B04 NAME: BB11

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D4-11		T	D1	2	BANK 06	3	T1	D4-1	
					BUSY I	4	F1	C5-24	3
D4-7		T	D2	1	BANK 07	6	T2	D4-3	
					BUSY I	5	F2	C5-23	3
D4-14		T	D3	20	CØM MEM	8	T3	D4-15	
					BUSY I	7	F3	F05-06	
P1A-35	F7-19		D4	19	MASTER	12	T4	B3-24	
					CLEAR	11	F4	F11-19	
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
C4-24		T	C1	24					
			C2	23					
			MS	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.1-00
7BRH; A1K/3R00 AD112 - C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.1-00B 17-21


LM(B), IØU BANK CØDE MULTIPLEXER (CMC 3.1)
HØLDING REGISTER (CMC 3.1)
+LM(B) ADRS BIT N+24 [-BBCADR(3-5)]
-IØU ADRS BIT N+24 [-IBCADR(3-5)]
+LM(B) ADRS BIT N+8 [-BBCADR(0-2)]
-IØU ADRS BIT N+8 [-IBCADR(0-2)]
+LM(B) ADRS BITS 26-28
-IØU ADRS BITS 26-28
+LM(B) ADRS BITS 12-14
-IØU ADRS BITS 12-14
CMC 4.0D-02
CMC 4.0E-02
CMC 4.0F-02
CMC 4.0G-02
CMC 4.1-10
-PH2
CMC 4.1-02
-NØN INTERLEAVED MØDE
12155 G12/BBC LM(B) BANK CØDE BITS (0-2)
12155 G11/IBC IØU BANK CØDE BITS (0-2)
MUX RGTR
-IØU BANK CØDE BITS (0-2)
+LM(B) BANK CØDE BIT (0)
-LM(B) BANK CØDE BITS (0-2)
+IØU BANK CØDE BIT (0)
CMC 4.1-07
CMC 4.1-03
CMC 4.1-06
LM(B),IØU,REFRESH 2 GØ BANK MERGE (CMC 3.2)
-IØU GØ BANKS 0-7
-REFRESH 2 GØ BANKS 0-7
CMC 4.1-09
12117 G08/GB0B GØ BANK 00 B
12117 G08/GB1B GØ BANK 01 B
12117 G08/GB2B GØ BANK 02 B
12117 F08/GB3B GØ BANK 03 B
12117 F08/GB4B GØ BANK 04 B
12117 F08/GB5B GØ BANK 05 B
12117 E08/GB6B GØ BANK 06 B
12117 E08/GB7B GØ BANK 07 B
-GØ BANKS 0-7B
CMC 4.1-00
LM(B) GØ BANK GENERATØR (CMC 3.2)
DECØDER
12170 G09/BGB
X→Y CØDER
BIAS HI=17
-LM(B) BANK CØDE BIT 0
-LM(B) BANK CØDE BIT 1
-LM(B) BANK CØDE BIT 2
-LM(B) REQ ENBL 1
+GØ CØM MEM B
-LM(B) GØ BANK 07
-LM(B) GØ BANK 06
-LM(B) GØ BANK 05
-LM(B) GØ BANK 04
-LM(B) GØ BANK 03
-LM(B) GØ BANK 02
-LM(B) GØ BANK 01
-LM(B) GØ BANK 00
(CMC 3.5)
LM(B) CØMMØN MEMØRY REQUEST ENABLE
12101 F05/CMEB
-LM(B) REQ
-LM(B) ADRS BIT 1
+CØNFLICT 3
+GØ CØM MEM B
-GØ CØM MEM B
CMC 4.1-08
REFRESH BANK SELECT HØLDING REGISTER (CMC 3.0)
12151 E13/RFAD
-REFRESH ADRS BIT 26
-REFRESH ADRS BIT 27
-REFRESH ADRS BIT 28
+REFRESH ADRS BIT 26
-REFRESH ADRS BITS (26-28) [-RFADR(26-28)]
CMC 4.11-07
-T3
12102 D08/RQ1
-REFRESH REQ 1 ENBL
+REFRESH REQ ENBL(T2)
NU
CLEAR BANK BUSY RECEIVERS (CMC 3.2)
±CLR BANKS 0-7 BUSY [-CLRBB(0.4)] [+CLRBBP(0.4)]
[-CLRBB(1.5)] [+CLRBBP(1.5)]
[-CLRBB(2.6)] [+CLRBBP(2.6)]
[-CLRBB(3.7)] [+CLRBBP(3.7)]
CM 4.0-08
CM 4.0-07
CM 4.0-06
CM 4.0-05
12114 G14/CBR0 CLEAR BANKS 0-4
12114 F14/CBR1 CLEAR BANKS 5-7
-CLR BANKS 0-7 BUSY
TP'S
+CLR BANKS 0-7 BUSY
LM(B) PREVIØUS CØMMØN MEMØRY REQUEST FLIP FLØP (CMC 3.5)
12131 D09/PCMB
-CØM MEM BUSY 4
+CØM MEM BUSY 3
CMC 4.1-04
SPEED UP CØMMØN MEMØRY TIMEØUT
12102 D08/SCMT
-SPEED UP CØM MEM TIMEØUT
TP6
CØMMØN MEMØRY BUSY 2 CØNTRØL (CMC 3.5)
+CLR BANKS 0-7 BUSY
+CLR CØM MEM BUSY
+CØM MEM BUSY 4
12102 D08/SCB2 SET CØM MEM BUSY II
+GØ CØM MEM A DYLD
-SET CØM MEM BUSY 2
-GØ BANKS 0-7A
-GØ BANKS 0-7 BUSY
+CLR BANKS 0-7 BUSY, +CLR CØM MEM BUSY
-BANKS 0-7 CM BUSY 2
-EXT CØM MEM BUSY
12117 G06/B2E0 BANK 00 BUSY 2 ENABLE
12117 G06/B2E1 BANK 01 BUSY 2 ENABLE
12117 G06/B2E2 BANK 02 BUSY 2 ENABLE
12117 F06/B2E3 BANK 03 BUSY 2 ENABLE
12117 F06/B2E4 BANK 04 BUSY 2 ENABLE
12117 F06/B2E5 BANK 05 BUSY 2 ENABLE
12117 E07/B2E6 BANK 06 BUSY 2 ENABLE
12117 E07/B2E7 BANK 07 BUSY 2 ENABLE
12117 E07/B2EC CØM MEM BUSY 2 ENABLE
TP5
BANK BUSY 2 CØNTRØL (CMC 3.2)
+MASTER CLEAR 1 [+MCLRP1]
CMC 4.16-05
+MASTER CLEAR 1
HØLDING REGISTER (CMC 3.2)
FLIP FLØP (CMC 3.2,3.5)
12151 G07/BB20 BANKS 00-05 BUSY 2
12151 F07/BB21
-T1
+MASTER CLEAR(T1)
-CØM MEM BUSY 2
+BANKS 0-7 BUSY 2
-MASTER CLEAR(T1)
-REFRESH REQ DLYD
+REFRESH REQUEST
CØMMØN MEMØRY REQUEST FLIP FLØP (CMC 3.5)
CØMMØN MEMØRY REQUEST
12131 B12/CMR
+GØ CØM MEM A DYLD
+GØ CØM MEM B DYLD
-LM(A) CØM MEM REQ
-LM(B) CØM MEM REQ

NØTES:

1. BACKUP CHARTS ØN SHEET CMC 4.1-00A/4.1-00B.

2. BANKS 06,07; CØM MEM BUSY 2; MASTER CLEAR; REFRESH REQUEST DLYD.

3. CØMMØN MEMØRY CIRCUITRY NØT USED IN AD112-C.

4. NØN-INTERLEAVED MØDE NØT USED IN AD112-C.

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CMC 3.0.3.2.3.5
LM(B).. GØ BANK GENERATØR; CØMMØN MEMØRY BUSY 2 CØNTRØL. LM(B). IØU BANK CØDE MULTIPLEXER
7BRH;A1K/3R00
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.1-01	17-22

12155 LOC: G12 NAME: BBC

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-162		T	A1	2	LM(B) BK CD BIT 0	8	T1	B9-1	2
PIC-165		T	B1	1		7	F1	G9-18	
PIC-158		T	A2	4	LM(B) BK CD BIT 1	5	T2	TERM	2
PIC-161		T	B2	3		6	F2	G9-16	
PIC-169		T	A3	16	LM(B) BK CD BIT 2	13	T3	TERM	2
PIC-166		T	B3	15		14	F3	G9-15	
			A4	18		12	T4		
			B4	17		11	F4		
			C1	24					
			C2	23					
G12-19		T	E1	20					
G11-20	G12-20		E2	19					
			MS	22					

12155 LOC: G11 NAME: IBC

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-142		T	A1	2	I0U BK CD BIT 0	8	T1	G10-18	
PIC-141		T	B1	1		7	F1	C11-3	
PIC-138		T	A2	4	I0U BK CD BIT 1	5	T2	G10-16	
PIC-137		T	B2	3		6	F2	TERM	
PIC-134		T	A3	16	I0U BK CD BIT 2	13	T3	G10-15	
PIC-130		T	B3	15		14	F3	TERM	
			A4	18		12	T4		
			B4	17		11	F4		
D07-19		T	C1	24					
			C2	23					
G11-19	G12-19		E1	20					
E5-4	G11-20		E2	19					
			MS	22					

12117 LOC: G08 NAME: GB0B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G10-5		T	A1	1	GO BANK 00 B	11	T1	F4-24	2
			B1	2		12	F1	TERM	
F10-5		T	C1	23					
			D1	24					
G9-5		T	E1	20					

12117 LOC: G08 NAME: GB1B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G10-7		T	A1	3	GO BANK 01 B	7	T1	F4-6	
			B1	4		8	F1	TERM	
F10-7		T	C1	5					
			D1	6					
G9-7		T	E1	22					

12117 LOC: G08 NAME: GB2B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G10-8		T	A1	15	GO BANK 02 B	14	T1	F4-18	
			B1	16		13	F1	TERM	
F10-8		T	C1	17					
			D1	18					
G9-8		T	E1	19					

12117 LOC: F08 NAME: GB3B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G10-6		T	A1	1	GO BANK 03 B	11	T1	E4-24	
			B1	2		12	F1	TERM	
F10-6		T	C1	23					
			D1	24					
G9-6		T	E1	20					

12117 LOC: F08 NAME: GB4B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G10-11		T	A1	3	GO BANK 04 B	7	T1	E4-6	
			B1	4		8	F1	TERM	
F10-11		T	C1	5					
			D1	6					
G9-11		T	E1	22					

12117 LOC: F8 NAME: GB5B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G10-13		T	A1	15	GO BANK 05 B	14	T1	E4-18	
			B1	16		13	F1	TERM	
F10-13		T	C1	17					
			D1	18					
G9-13		T	E1	19					

12117 LOC: E08 NAME: GB6B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G10-14		T	A1	1	GO BANK 06 B	11	T1	D4-24	
			B1	2		12	F1	TERM	
F10-14		T	C1	23					
			D1	24					
G9-14		T	E1	20					

12117 LOC: E08 NAME: GB7B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G10-12		T	A1	3	GO BANK 07 B	7	T1	D4-6	
			B1	4		8	F1	TERM	
F10-12		T	C1	5					
			D1	6					
G9-12		T	E1	22					

12114 LOC: G14 NAME: CBR0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-39		T	A1	4	CLEAR BK 0	5	T1	TP-45	
P2B-40		T	B1	3		6	F1	F4-2	
P2B-37		T	A2	24	1	11	T2	TP-34	
P2B-38		T	B2	23		12	F2	F4-4	
P2B-33		T	A3	2	2	7	T3	TP-44	
P2B-34		T	B3	1		8	F3	F4-16	
P2B-31		T	A4	20	3	13	T4	TP-43	
P2B-32		T	B4	19		14	F4	E4-2	
P2B-29		T	A5	18	4	15	T5	TP-42	
P2B-30		T	B5	17		16	F5	E4-4	

12114 LOC: F14 NAME: CBR1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-27		T	A1	2	CLEAR BK 5	7	T1	TP-36	
P2B-28		T	B1	1		8	F1	E4-16	
P2B-23		T	A2	4	6	5	T2	TP-35	
P2B-24		T	B2	3		6	F2	D4-2	
P2B-21		T	A3	18	7	15	T3	TP-41	
P2B-22		T	B3	17		16	F3	D4-4	
			A4				T4		
			B4				F4		
			A5				T5		
			B5				F5		

12117 LOC: G06 NAME: B2E0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G7-3		T	A1	1	BANK 00 BUSY 2 ENABLE	11	T1	G7-2	
F4-2		T	B1	2		12	F1	TP-2	
			C1	23					
E2-1		T	D1	24					
F4-20		T	E1	20					

12117 LOC: G06 NAME: B2E1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G7-6		T	A1	3	BANK 01 BUSY 2 ENABLE	7	T1	G7-1	
F4-4		T	B1	4		8	F1	TP-9	
			C1	5					
E2-3		T	D1	6					
F4-22		T	E1	22					

12117 LOC: G06 NAME: B2E2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G7-8		T	A1	15	BANK 02 BUSY 2 ENABLE	14	T1	G7-20	
F4-16		T	B1	16		13	F1	TP-3	
			C1	17					
E2-15		T	D1	18					
F4-19		T	E1	19					

12117 LOC: F06 NAME: B2E3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G7-12		T	A1	1	BANK 03 BUSY 2 ENABLE	11	T1	G7-19	
E4-2		T	B1	2		12	F1	TP-15	
			C1	23					
D2-1		T	D1	24					
E4-20		T	E1	20					

12117 LOC: F06 NAME: B2E4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G7-14		T	A1	3	BANK 04 BUSY 2 ENABLE	7	T1	G7-18	
E4-4		T	B1	4		8	F1	TP-5	
			C1	5					
D2-3		T	D1	6					
E4-22		T	E1	22					

12117 LOC: F06 NAME: B2E5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G7-16		T	A1	15	BANK 05 BUSY 2 ENABLE	14	T1	G7-17	
E4-16		T	B1	16		13	F1	TP-4	
			C1	17					
D2-15		T	D1	18					
E4-19		T	E1	19					

12117 LOC: E7 NAME: B2E6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F7-3		T	A1	1	BANK 06 BUSY 2 ENABLE	11	T1	F7-2	
D4-2		T	B1	2		12	F1	TP-18	
			C1	23					
C2-1		T	D1	24					
D4-20		T	E1	20					

12117 LOC: E07 NAME: B2E7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F7-6		T	A1	3	BANK 07 BUSY 2 ENABLE	7	T1	F7-1	
D4-4		T	B1	4		8	F1	TP-17	
			C1	5					
C2-3		T	D1	6					
D4-22		T	E1	22					

12117 LOC: E07 NAME: B2EC

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F7-8	C6-6		A1	15	COM MEM BUSY 2 ENABLE	14	T1	F7-20	
D4-16		T	B1	16		13	F1	TP-21	
			C1	17					
D8-15		T	D1	18					
F13-5	D4-19		E1	19					

12151 LOC: E13 NAME: RFAD

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-101		T	D1	1	REFRESH ADRS 26	6	T1	F11-23	
						5	F1	F11-1	
PIC-072		T	D2	2	REFRESH ADRS 27	3	T2	D05-16	
						4	F2	TERM	
PIC-076		T	D3	20	REFRESH ADRS 28	8	T3	C05-19	
						7	F3	TERM	
C02-15		T	D4	17	REFRESH REQUEST	16	T4	TERM	
						15	F4	D08-04	
			D5	18		14	T5		
						13	F5		
			D6	19		12	T6		
						11	F6		
B11-24		T	C1	24					
			C2	23					
			MS	22					

12151 LOC: G07 NAME: BB20

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G6-11		T	D1	2	BANK 00 BUSY 2	3	T1	G6-1	
						4	F1	E10-6	4
G6-7		T	D2	1	01	6	T2	G6-3	
						5	F2	E10-5	4
G6-14		T	D3	20	02	8	T3	G6-15	
						7	F3	E10-4	4
F6-11		T	D4	19	03	12	T1	F6-1	
						11	F4	E10-3	4
F6-7		T	D5	18	04	14	T5	F6-3	
						13	F5	E10-2	4
F6-14		T	D6	17	05	16	T6	F6-15	
						15	F6	E10-1	4
F7-24		T	C1	24					
			C2	23					
			MS	22					

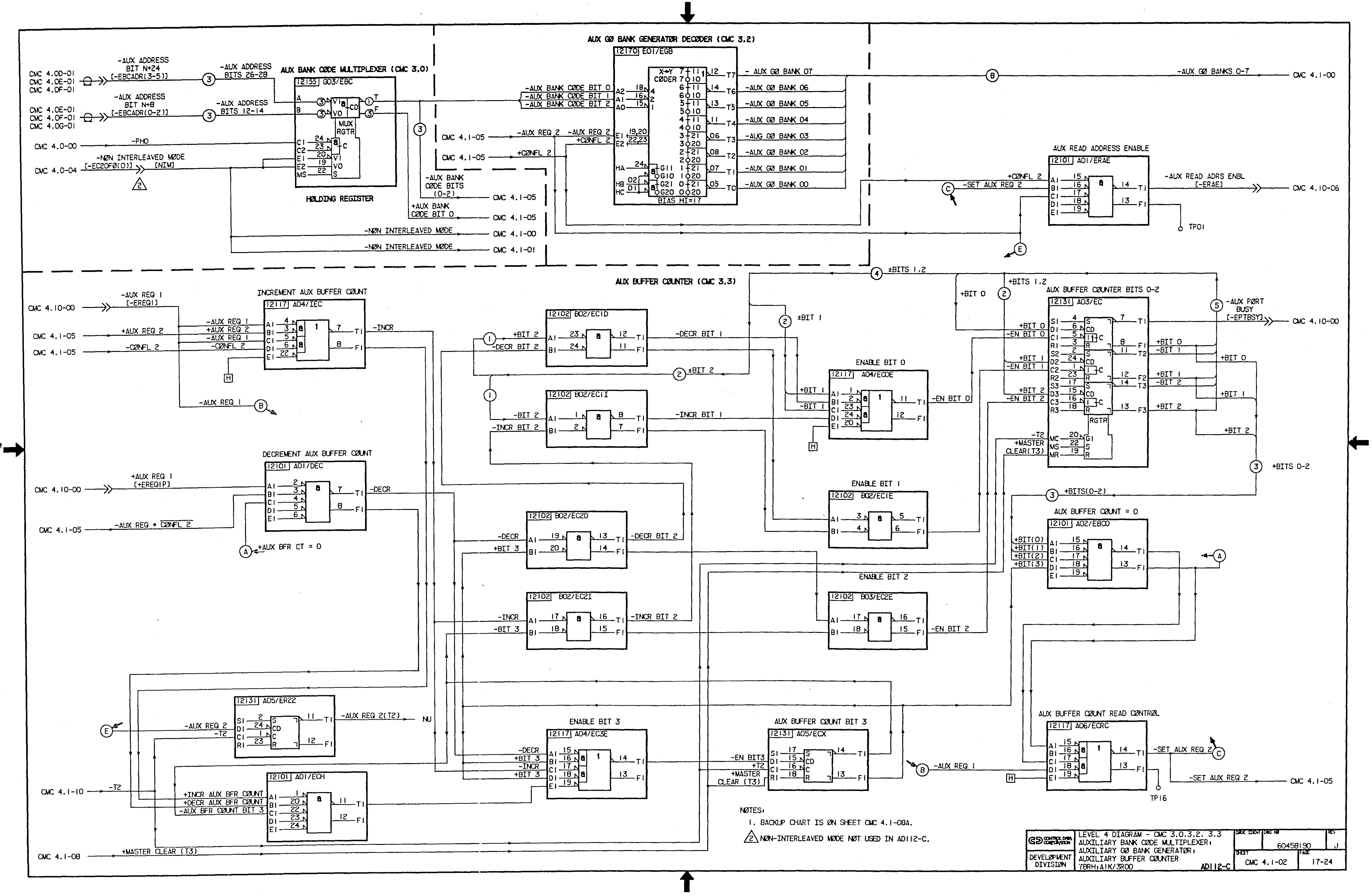
12151 LOC: F07 NAME: BB21 [1]

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E7-11		T	D1	2	BANK 06 BUSY 2	3	T1	E7-1	
						4	F1	E10-24	4
E7-7		T	D2	1	BANK 07 BUSY 2	6	T2	E7-3	
						5	F2	E10-23	4
E7-14		T	D3	20	COM MEM BUSY 2	8	T3	E7-15	
						7	F3	TERM	
B4-19		T	D4	19	MASTER CLEAR	12	T4	F9-20	4
						11	F4	F11-20	
B11-13		T	D5	18	REFR REQ DLYD	14	T5	TERM	
						13	F5	G05-24	
			D6	17		16	T6		
						15	F6		
E6-11	G7-24		C1	24					
			C2	23					
			MS	22					

NOTES:

[1] COMMON MEMORY CIRCUITRY NOT USED IN AD112-C.

LEVEL 4 BACKUP CHART SUPPLEMENTAL WIRING INFORMATION CMC 4.1-01 78RH; AIK/3R00 AD112-C	DWG NO 60458190	REV J
	SHEET CMC 4.1-01A	17-23



NOTES:

1. BACKUP CHART IS ON SHEET CMC 4.1-08A.

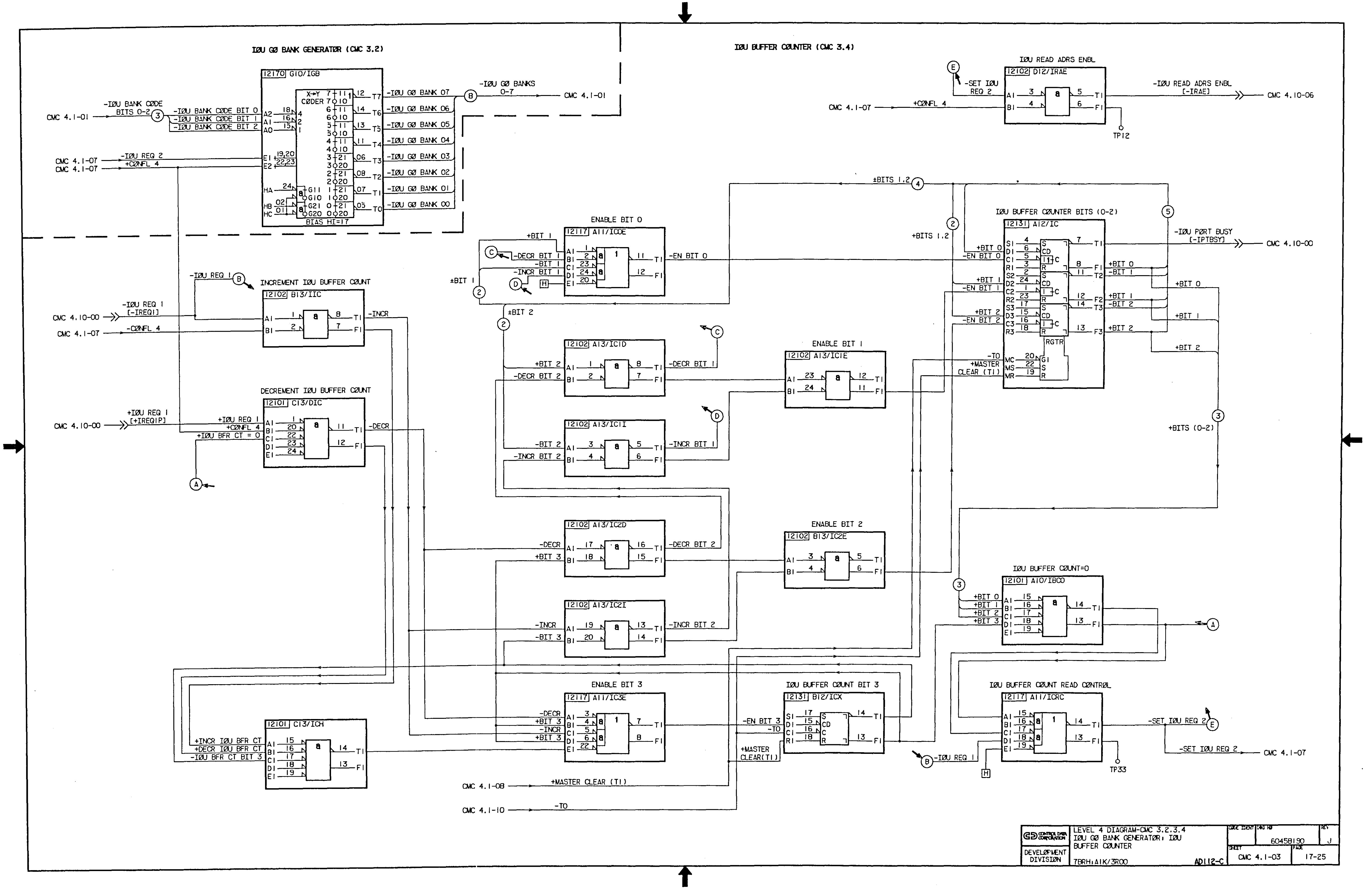
△2 NON-INTERLEAVED MODE NOT USED IN AD112-C.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM - CMC 3.0.3.2. 3.3
AUXILIARY BANK CODE MULTIPLEXER;
AUXILIARY GO BANK GENERATOR;
AUXILIARY BUFFER COUNTER
7BRH;A1K/3R00
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.1-02	17-24



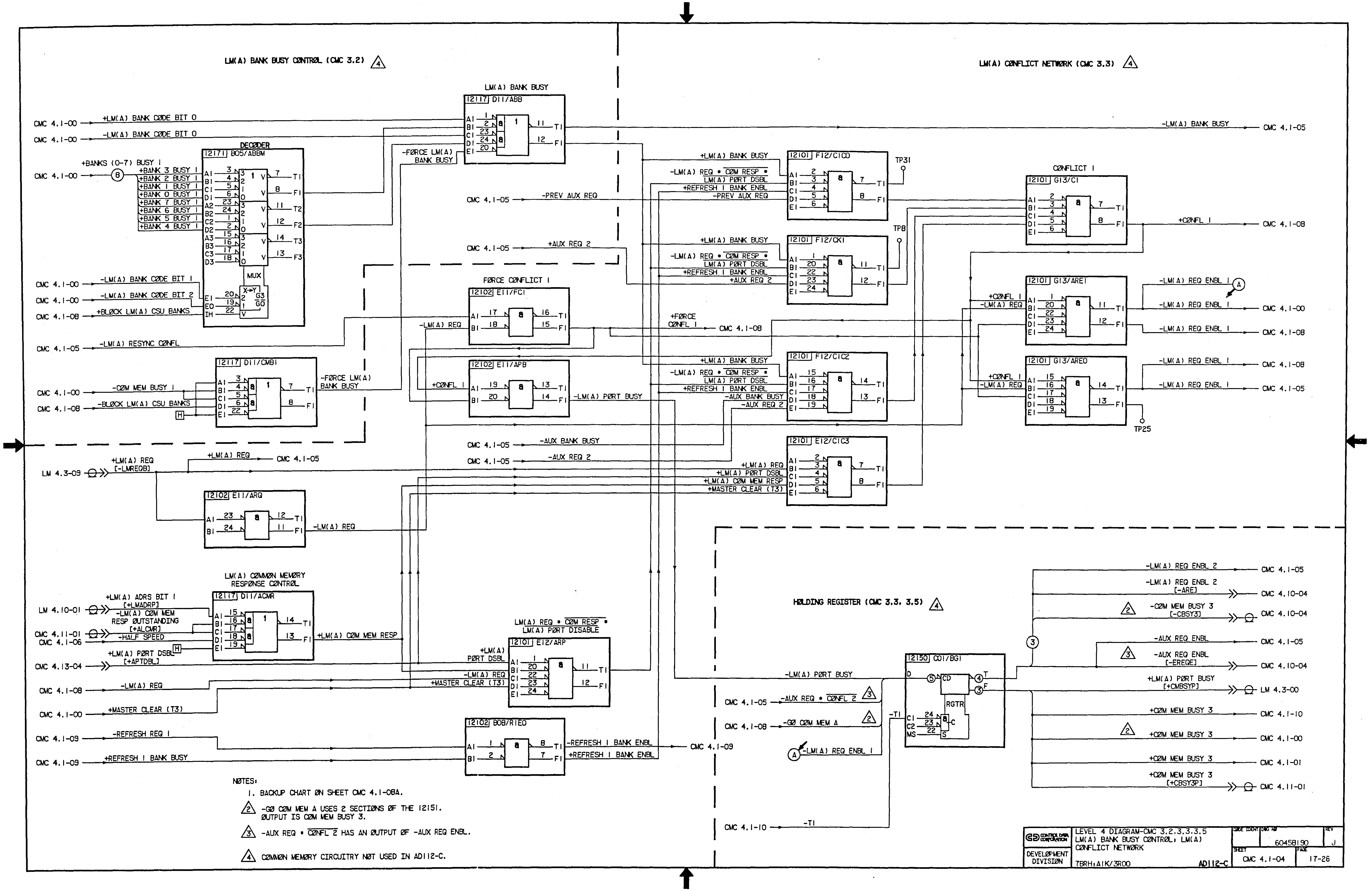
CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.2.3.4
IOU GO BANK GENERATOR, IOU
BUFFER COUNTER

7BRH, A1K/3R00 AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.1-03
PAGE 17-25


LM(A) BANK BUSY CONTROL (CMC 3.2) 4
LM(A) CONFLICT NETWORK (CMC 3.3) 4
LM(A) BANK BUSY
12117 D11/ABB
CMC 4.1-00 +LM(A) BANK CODE BIT 0
CMC 4.1-00 -LM(A) BANK CODE BIT 0
-FORCE LM(A) BANK BUSY
-LM(A) BANK BUSY CMC 4.1-05
DECODER
12171 B05/ABBM
+BANKS (0-7) BUSY 1
CMC 4.1-00
+BANK 3 BUSY 1
+BANK 2 BUSY 1
+BANK 1 BUSY 1
+BANK 0 BUSY 1
+BANK 7 BUSY 1
+BANK 6 BUSY 1
+BANK 5 BUSY 1
+BANK 4 BUSY 1
MUX
CMC 4.1-00 -LM(A) BANK CODE BIT 1
CMC 4.1-00 -LM(A) BANK CODE BIT 2
CMC 4.1-08 +BLOCK LM(A) CSU BANKS
CMC 4.1-05 -LM(A) RESYNC CONFL
12117 D11/CMB1
CMC 4.1-00 -COM MEM BUSY 1
CMC 4.1-08 -BLOCK LM(A) CSU BANKS
-FORCE LM(A) BANK BUSY
CMC 4.1-05 -PREV AUX REQ
CMC 4.1-05 +AUX REQ 2
FORCE CONFLICT 1
12102 E11/FC1
-LM(A) REQ
+FORCE CONFL 1 CMC 4.1-08
12102 E11/APB
+CONFL 1
-LM(A) PORT BUSY
+LM(A) BANK BUSY
-LM(A) REQ • COM RESP •
LM(A) PORT DSBL
+REFRESH 1 BANK ENBL
-PREV AUX REQ
12101 F12/C1C0
TP31
TP8
12101 F12/CK1
+AUX REQ 2
12101 F12/C1C2
-AUX BANK BUSY
-AUX REQ 2
CONFLICT 1
12101 G13/C1
+CONFL 1 CMC 4.1-08
12101 G13/ARE1
+CONFL 1
-LM(A) REQ
-LM(A) REQ ENBL 1 A
-LM(A) REQ ENBL 1 CMC 4.1-00
-LM(A) REQ ENBL 1 CMC 4.1-08
12101 G13/ARE0
-LM(A) REQ ENBL 1 CMC 4.1-08
-LM(A) REQ ENBL 1 CMC 4.1-05
TP25
CMC 4.1-05 -AUX BANK BUSY
CMC 4.1-05 -AUX REQ 2
12101 E12/C1C3
+LM(A) REQ
+LM(A) PORT DSBL
+LM(A) COM MEM RESP
+MASTER CLEAR (T3)
LM 4.3-09 +LM(A) REQ [-LMREQB]
+LM(A) REQ CMC 4.1-05
12102 E11/ARQ
-LM(A) REQ
LM(A) COMMON MEMORY RESPONSE CONTROL
12117 D11/ACMR
LM 4.10-01 +LM(A) ADRS BIT 1 [+LMADRP]
CMC 4.11-01 -LM(A) COM MEM RESP OUTSTANDING [+ALCMR]
CMC 4.1-06 -HALF SPEED
CMC 4.13-04 +LM(A) PORT DSBL [+APTDBL]
+LM(A) COM MEM RESP
LM(A) REQ • COM RESP • LM(A) PORT DISABLE
12101 E12/ARP
+LM(A) PORT DSBL
-LM(A) REQ
+MASTER CLEAR (T3)
CMC 4.1-08 -LM(A) REQ
CMC 4.1-00 +MASTER CLEAR (T3)
CMC 4.1-09 -REFRESH REQ 1
CMC 4.1-09 +REFRESH 1 BANK BUSY
12102 B08/RIE0
-REFRESH 1 BANK ENBL
+REFRESH 1 BANK ENBL CMC 4.1-09
HOLDING REGISTER (CMC 3.3, 3.5) 4
12150 C01/BG1
RGTR
-LM(A) PORT BUSY
CMC 4.1-05 -AUX REQ • CONFL 2 3
CMC 4.1-08 -GO COM MEM A 2
A -LM(A) REQ ENBL 1
CMC 4.1-10 -T1
-LM(A) REQ ENBL 2 CMC 4.1-05
-LM(A) REQ ENBL 2 [-ARE] CMC 4.10-04
2 -COM MEM BUSY 3 [-CBSY3] CMC 4.10-04
-AUX REQ ENBL CMC 4.1-05
3 -AUX REQ ENBL [-EREQE] CMC 4.10-04
+LM(A) PORT BUSY [+CMBSYP] LM 4.3-00
+COM MEM BUSY 3 CMC 4.1-10
2 +COM MEM BUSY 3 CMC 4.1-00
+COM MEM BUSY 3 CMC 4.1-01
+COM MEM BUSY 3 [+CBSY3P] CMC 4.11-01

NOTES:

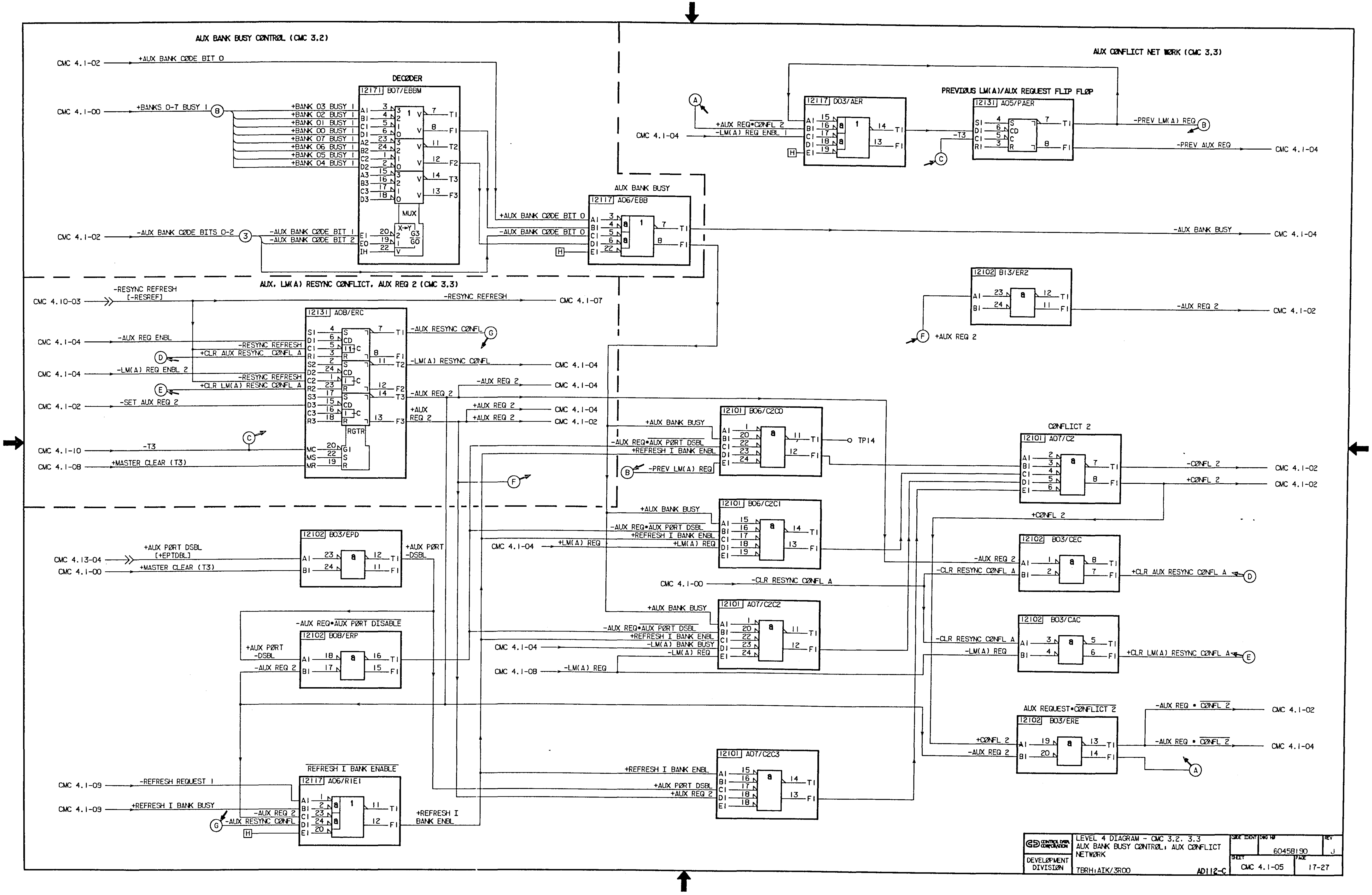
1. BACKUP CHART ON SHEET CMC 4.1-08A.

2. -GO COM MEM A USES 2 SECTIONS OF THE 12151. OUTPUT IS COM MEM BUSY 3.

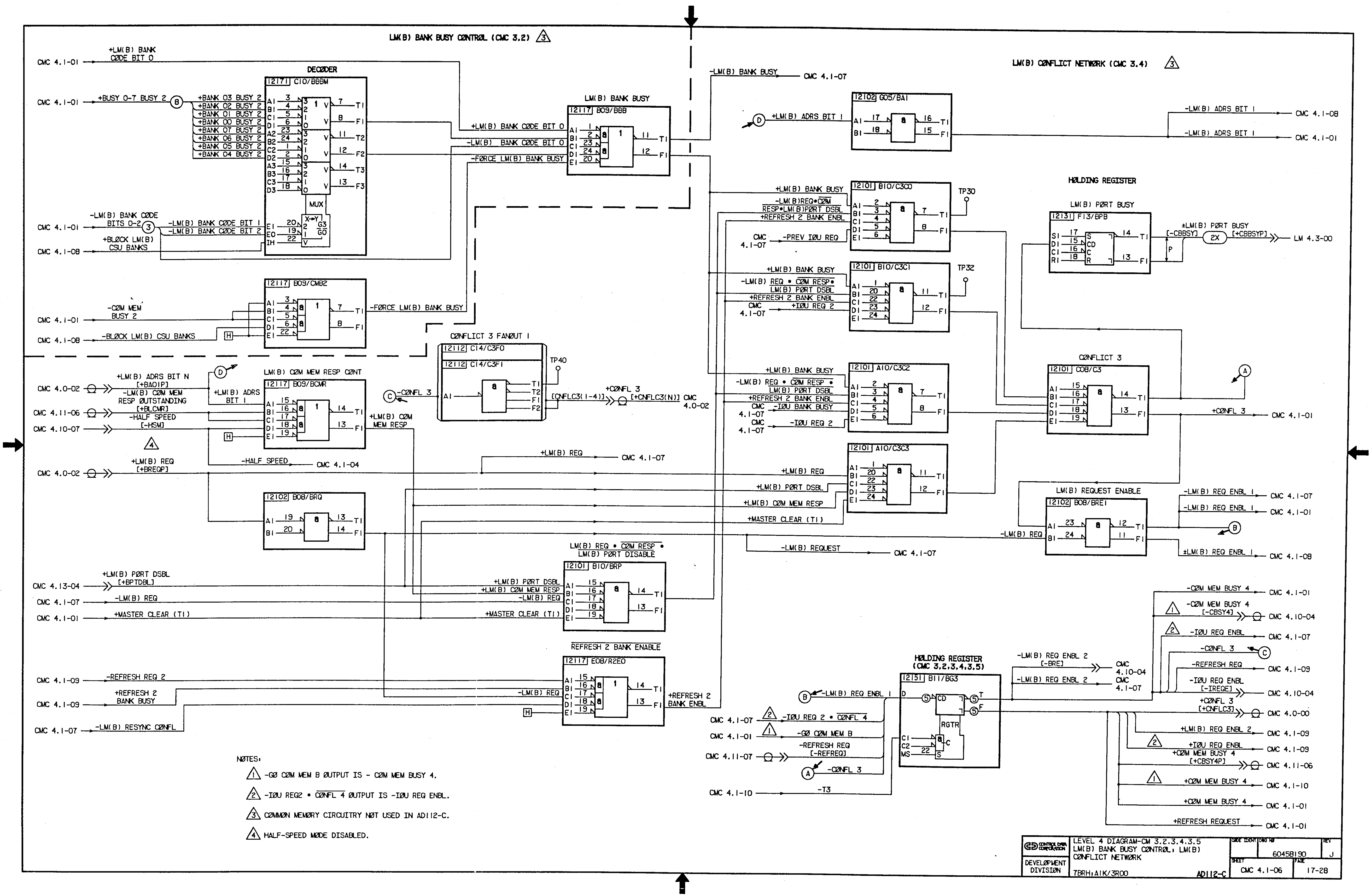
3. -AUX REQ • $\overline{\text{CONFL 2}}$ HAS AN OUTPUT OF -AUX REQ ENBL.

4. COMMON MEMORY CIRCUITRY NOT USED IN AD112-C.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION
LEVEL 4 DIAGRAM-CMC 3.2,3.3,3.5
LM(A) BANK BUSY CONTROL, LM(A)
CONFLICT NETWORK
7BRH:A1K/3R00 AD112-C
CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.1-04
PAGE 17-26



CONTROL DATA CORPORATION
DEVELOPMENT DIVISION
LEVEL 4 DIAGRAM - CMC 3.2, 3.3
AUX BANK BUSY CONTROL, AUX CONFLICT NETWORK
7BRH:AIK/3R00
AD112-C
DWG NO 60458190
REV J
SHEET CMC 4.1-05
PAGE 17-27


LM(B) BANK BUSY CONTROL (CMC 3.2) 3
CMC 4.1-01 +LM(B) BANK CODE BIT 0
DECODER
12171 C10/BBBM
CMC 4.1-01 +BUSY 0-7 BUSY 2 B
+BANK 03 BUSY 2
+BANK 02 BUSY 2
+BANK 01 BUSY 2
+BANK 00 BUSY 2
+BANK 07 BUSY 2
+BANK 06 BUSY 2
+BANK 05 BUSY 2
+BANK 04 BUSY 2
MUX
X→Y G3 G0
CMC 4.1-01 -LM(B) BANK CODE BITS 0-2 3
-LM(B) BANK CODE BIT 1
-LM(B) BANK CODE BIT 2
CMC 4.1-08 +BLOCK LM(B) CSU BANKS
LM(B) BANK BUSY
12117 B09/BBB
+LM(B) BANK CODE BIT 0
-LM(B) BANK CODE BIT 0
-FORCE LM(B) BANK BUSY
12117 B09/CMB2
CMC 4.1-01 -COM MEM BUSY 2
CMC 4.1-08 -BLOCK LM(B) CSU BANKS
H
-FORCE LM(B) BANK BUSY
CONFLICT 3 FANOUT 1
12112 C14/C3F0
12112 C14/C3F1
TP40
C -CONFL 3
[CNFLC3(1-4)]
+CONFL 3
[+CNFLC3(N)] CMC 4.0-02
LM(B) COM MEM RESP CONT
12117 B09/BCMR
CMC 4.0-02 +LM(B) ADRS BIT N [+BAOIP]
D
+LM(B) ADRS BIT 1
CMC 4.11-06 -LM(B) COM MEM RESP OUTSTANDING [+BLCMR]
CMC 4.10-07 -HALF SPEED [-HSM]
4
+LM(B) COM MEM RESP
-HALF SPEED CMC 4.1-04
CMC 4.0-02 +LM(B) REQ [+BREQP]
+LM(B) REQ CMC 4.1-07
12102 B08/BRQ
CMC 4.13-04 +LM(B) PORT DSBL [+BPTDBL]
CMC 4.1-07 -LM(B) REQ
CMC 4.1-01 +MASTER CLEAR (T1)
LM(B) REQ • COM RESP • LM(B) PORT DISABLE
12101 B10/BRP
+LM(B) PORT DSBL
+LM(B) COM MEM RESP
-LM(B) REQ
+MASTER CLEAR (T1)
REFRESH 2 BANK ENABLE
12117 E08/R2E0
CMC 4.1-09 -REFRESH REQ 2
CMC 4.1-09 +REFRESH 2 BANK BUSY
CMC 4.1-07 -LM(B) RESYNC CONFL
-LM(B) REQ
+REFRESH 2 BANK ENBL
-LM(B) BANK BUSY CMC 4.1-07
LM(B) CONFLICT NETWORK (CMC 3.4) 3
12102 G05/BA1
D +LM(B) ADRS BIT 1
-LM(B) ADRS BIT 1 CMC 4.1-08
-LM(B) ADRS BIT 1 CMC 4.1-01
12101 B10/C3C0
TP30
+LM(B) BANK BUSY
-LM(B) REQ • COM RESP • LM(B) PORT DSBL
+REFRESH 2 BANK ENBL
CMC 4.1-07 -PREV IOU REQ
12101 B10/C3C1
TP32
+LM(B) BANK BUSY
-LM(B) REQ • COM RESP • LM(B) PORT DSBL
+REFRESH 2 BANK ENBL
CMC 4.1-07 +IOU REQ 2
12101 A10/C3C2
+LM(B) BANK BUSY
-LM(B) REQ • COM RESP • LM(B) PORT DSBL
+REFRESH 2 BANK ENBL
CMC 4.1-07 -IOU BANK BUSY
CMC 4.1-07 -IOU REQ 2
12101 A10/C3C3
+LM(B) REQ
+LM(B) PORT DSBL
+LM(B) COM MEM RESP
+MASTER CLEAR (T1)
-LM(B) REQUEST CMC 4.1-07
HOLDING REGISTER
LM(B) PORT BUSY
12131 F13/BPB
±LM(B) PORT BUSY [-CBBSY] 2X [+CBBSYP] LM 4.3-00
P
CONFLICT 3
12101 C08/C3
A
+CONFL 3 CMC 4.1-01
LM(B) REQUEST ENABLE
12102 B08/BRE1
-LM(B) REQ
-LM(B) REQ ENBL 1 CMC 4.1-07
-LM(B) REQ ENBL 1 CMC 4.1-01
B
±LM(B) REQ ENBL 1 CMC 4.1-08
HOLDING REGISTER (CMC 3.2,3.4,3.5)
12151 B11/BG3
RGTR
B -LM(B) REQ ENBL 1
CMC 4.1-07 2 -IOU REQ 2 • CONFL 4
CMC 4.1-01 1 -GO COM MEM B
CMC 4.11-07 -REFRESH REQ [-REFREQ]
A -CONFL 3
CMC 4.1-10 -T3
-LM(B) REQ ENBL 2 [-BRE] CMC 4.10-04
-LM(B) REQ ENBL 2 CMC 4.1-07
-COM MEM BUSY 4 CMC 4.1-01
1 -COM MEM BUSY 4 [-CBSY4] CMC 4.10-04
2 -IOU REQ ENBL CMC 4.1-07
-CONFL 3 C
-REFRESH REQ CMC 4.1-09
-IOU REQ ENBL [-IREQE] CMC 4.10-04
+CONFL 3 [+CNFLC3] CMC 4.0-00
+LM(B) REQ ENBL 2 CMC 4.1-09
2 +IOU REQ ENBL CMC 4.1-09
+COM MEM BUSY 4 [+CBSY4P] CMC 4.11-06
1 +COM MEM BUSY 4 CMC 4.1-10
+COM MEM BUSY 4 CMC 4.1-01
+REFRESH REQUEST CMC 4.1-01

NOTES:

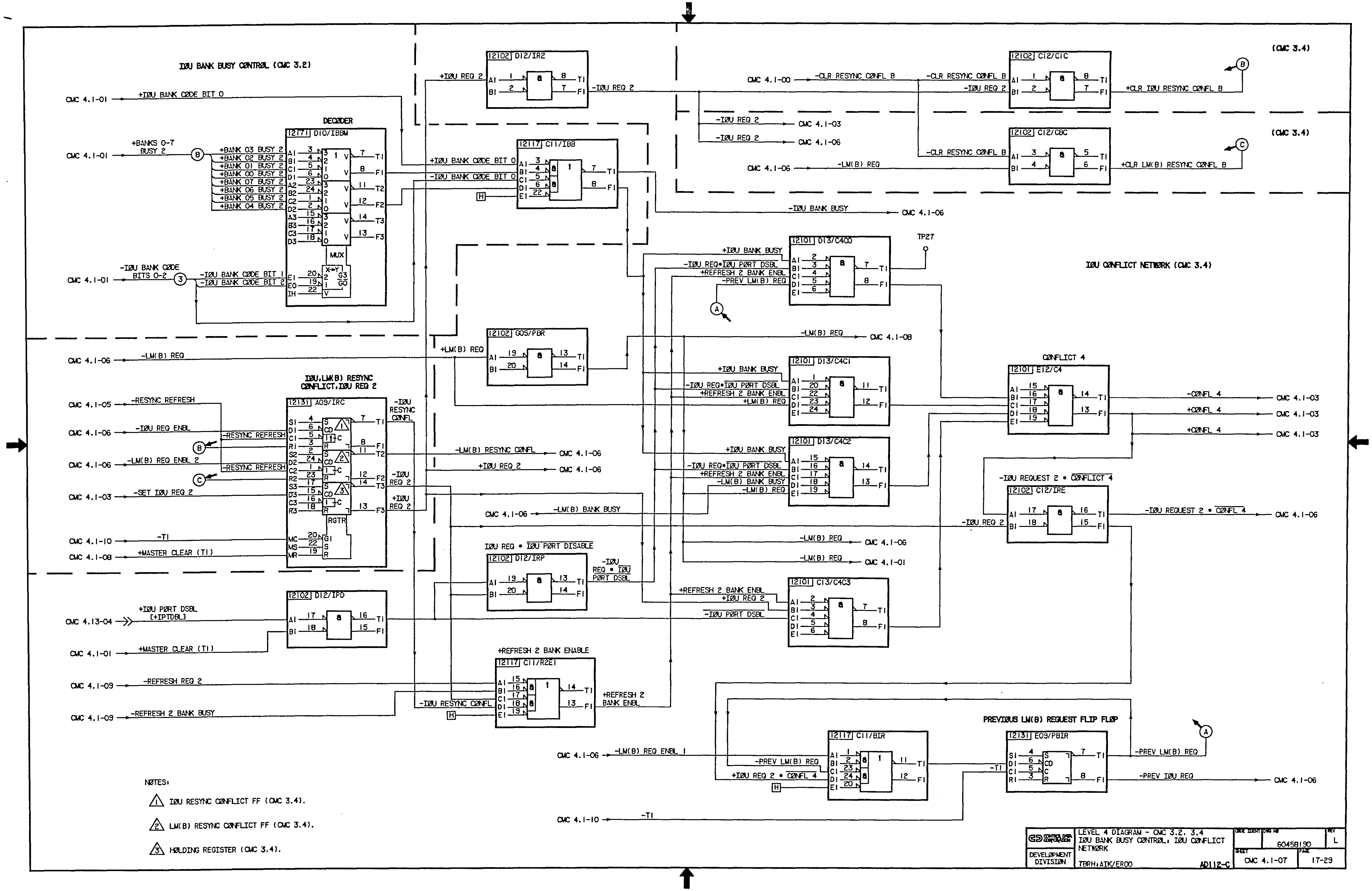
1. -GO COM MEM B OUTPUT IS - COM MEM BUSY 4.
2. -IOU REQ2 • $\overline{\text{CONFL 4}}$ OUTPUT IS -IOU REQ ENBL.
3. COMMON MEMORY CIRCUITRY NOT USED IN AD112-C.
4. HALF-SPEED MODE DISABLED.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CM 3.2.3.4.3.5
LM(B) BANK BUSY CONTROL; LM(B)
CONFLICT NETWORK
7BRH;A1K/3R00
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.1-06	17-28

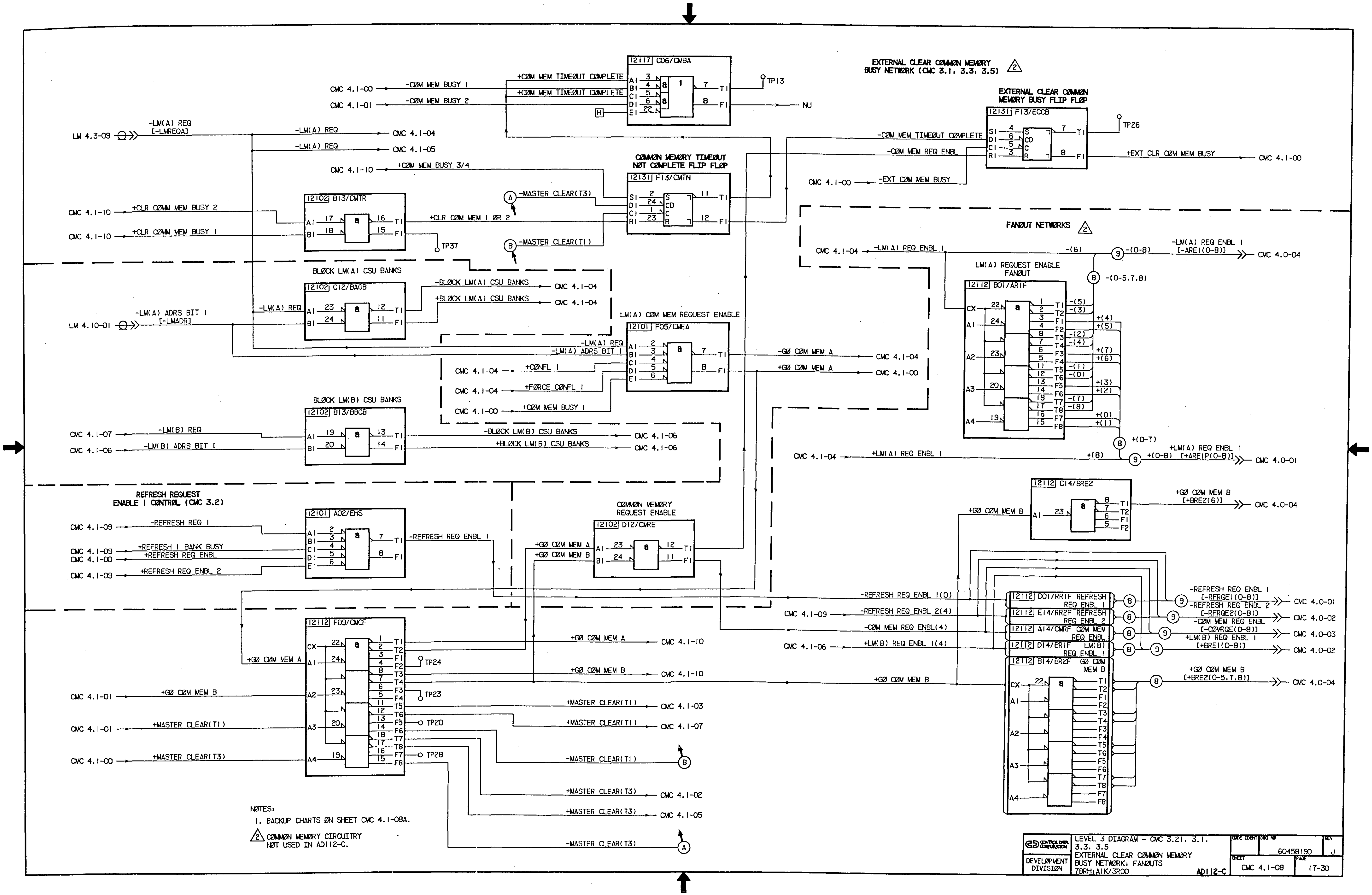


NOTES:

1. IOU RESYNC CONFLICT FF (CMC 3.4).
2. LM(B) RESYNC CONFLICT FF (CMC 3.4).
3. HOLDING REGISTER (CMC 3.4).

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION
LEVEL 4 DIAGRAM - CMC 3.2, 3.4
IOU BANK BUSY CONTROL, IOU CONFLICT NETWORK
TBRH,AIK/ERO0
AD112-C

CODE IDENT	DWG NO	REV
	60458190	L
SHEET		PAGE
CMC 4.1-07		17-29



12117 C06/CMBA
TP13
NU
CMC 4.1-00 -COM MEM BUSY 1
CMC 4.1-01 -COM MEM BUSY 2
+COM MEM TIMEOUT COMPLETE
+COM MEM TIMEOUT COMPLETE
LM 4.3-09 -LM(A) REQ [-LMREQA]
-LM(A) REQ CMC 4.1-04
-LM(A) REQ CMC 4.1-05
CMC 4.1-10 +COM MEM BUSY 3/4
COMMON MEMORY TIMEOUT NOT COMPLETE FLIP FLOP
12131 F13/CMTN
A -MASTER CLEAR(T3)
B -MASTER CLEAR(T1)
12102 B13/CMTR
CMC 4.1-10 +CLR COMM MEM BUSY 2
CMC 4.1-10 +CLR COMM MEM BUSY 1
+CLR COM MEM 1 OR 2
TP37
BLOCK LM(A) CSU BANKS
12102 C12/BAGB
-BLOCK LM(A) CSU BANKS CMC 4.1-04
+BLOCK LM(A) CSU BANKS CMC 4.1-04
LM 4.10-01 -LM(A) ADRS BIT 1 [-LMADR]
-LM(A) REQ
LM(A) COM MEM REQUEST ENABLE
12101 F05/CMEA
-LM(A) REQ
-LM(A) ADRS BIT 1
CMC 4.1-04 +CONFL 1
CMC 4.1-04 +FORCE CONFL 1
CMC 4.1-00 +COM MEM BUSY 1
-GO COM MEM A CMC 4.1-04
+GO COM MEM A CMC 4.1-00
BLOCK LM(B) CSU BANKS
12102 B13/BBCB
CMC 4.1-07 -LM(B) REQ
CMC 4.1-06 -LM(B) ADRS BIT 1
-BLOCK LM(B) CSU BANKS CMC 4.1-06
+BLOCK LM(B) CSU BANKS CMC 4.1-06
EXTERNAL CLEAR COMMON MEMORY BUSY NETWORK (CMC 3.1, 3.3, 3.5) 2
EXTERNAL CLEAR COMMON MEMORY BUSY FLIP FLOP
12131 F13/ECCB
TP26
-COM MEM TIMEOUT COMPLETE
-COM MEM REQ ENBL
+EXT CLR COM MEM BUSY CMC 4.1-00
CMC 4.1-00 -EXT COM MEM BUSY
FANOUT NETWORKS 2
CMC 4.1-04 -LM(A) REQ ENBL 1
-(6) 9 -(0-8)
-LM(A) REQ ENBL 1 [-AREI(0-8)] CMC 4.0-04
8 -(0-5,7,8)
LM(A) REQUEST ENABLE FANOUT
12112 B01/ARIF
8 +(0-7)
CMC 4.1-04 +LM(A) REQ ENBL 1 +(8) 9 +(0-8)
+LM(A) REQ ENBL 1 [+AREIP(0-8)] CMC 4.0-01
12112 C14/BRE2
+GO COM MEM B
+GO COM MEM B [+BRE2(6)] CMC 4.0-04
REFRESH REQUEST ENABLE 1 CONTROL (CMC 3.2)
12101 A02/EHS
CMC 4.1-09 -REFRESH REQ 1
CMC 4.1-09 +REFRESH 1 BANK BUSY
CMC 4.1-00 +REFRESH REQ ENBL
CMC 4.1-09 +REFRESH REQ ENBL 2
-REFRESH REQ ENBL 1
COMMON MEMORY REQUEST ENABLE
12102 D12/CMRE
+GO COM MEM A
+GO COM MEM B
-REFRESH REQ ENBL 1(0)
CMC 4.1-09 -REFRESH REQ ENBL 2(4)
-COM MEM REQ ENBL(4)
CMC 4.1-06 +LM(B) REQ ENBL 1(4)
+GO COM MEM B
12112 D01/RR1F REFRESH REQ ENBL 1
12112 E14/RR2F REFRESH REQ ENBL 2
12112 A14/CMRF COM MEM REQ ENBL
12112 D14/BR1F LM(B) REQ ENBL 1
12112 B14/BR2F GO COM MEM B
-REFRESH REQ ENBL 1 [-RFRQE1(0-8)] CMC 4.0-01
-REFRESH REQ ENBL 2 [-RFRQE2(0-8)] CMC 4.0-02
-COM MEM REQ ENBL [-COMRQE(0-8)] CMC 4.0-03
+LM(B) REQ ENBL 1 [+BRE1(0-8)] CMC 4.0-02
+GO COM MEM B [+BRE2(0-5,7,8)] CMC 4.0-04
12112 F09/CMCF
+GO COM MEM A
CMC 4.1-01 +GO COM MEM B
CMC 4.1-01 +MASTER CLEAR(T1)
CMC 4.1-00 +MASTER CLEAR(T3)
TP24
TP23
TP20
TP28
+GO COM MEM A CMC 4.1-10
+GO COM MEM B CMC 4.1-10
+MASTER CLEAR(T1) CMC 4.1-03
+MASTER CLEAR(T1) CMC 4.1-07
-MASTER CLEAR(T1) B
+MASTER CLEAR(T3) CMC 4.1-02
+MASTER CLEAR(T3) CMC 4.1-05
-MASTER CLEAR(T3) A

NOTES:

1. BACKUP CHARTS ON SHEET CMC 4.1-08A.

2 COMMON MEMORY CIRCUITRY NOT USED IN AD112-C.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION
LEVEL 3 DIAGRAM - CMC 3.21, 3.1, 3.3, 3.5
EXTERNAL CLEAR COMMON MEMORY BUSY NETWORK; FANOUTS
7BRH;A1K/3R00
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.1-08	17-30

12155 LOC: G03 NAME: EBC

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1C-35		T	A1	2	ECS BK	8	T1	E1-18	3
P1C-36		T	B1	1	CD BIT 0	7	F1	A6-3	
P1C-32		T	A2	4	ECS BK	5	T2	E1-16	3
P1C-31		T	B2	3	CD BIT 1	6	F2	TERM	
P1C-27		T	A3	16	ECS BK	13	T3	E1-15	3
P1C-28		T	B3	15	CD BIT 2	14	F3	TERM	
			A4	18		12	T4		
			B4	17		11	F4		
E06-19		T	C1	24					
			C2	23					
G3-19	E5-4		E1	20					
P2A-11	G3-20		E2	19					
			MS	22					

LOGIC ON SHEET CMC 4.1-02

12150 LOC: C01 NAME: BG1 △

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E11-14		T	D1	1	LM(A) PORT BUSY	6	T1	TERM	1
						5	F1	P1C-003	1
B3-13	A1-3		D2	20	ECS REQUEST ENABLE	8	T2	A8-6	
						7	F2	TERM	
C1-19		T	D3	18	COM MEM BUSY 3	14	T3	P1C-4	
						13	F3	B8-3	2
F5-7	C1-18		D4	19	COM MEM BUSY 3	12	T4	TERM	
						11	F4	E5-1	
F3-19		T	D5	17	LM(A) REQ ENABLE	16	T5	A8-24	
						15	F5	TERM	2
			D6	2		3	T6		
						4	F6		
C7-16		T	C1	24					
			C2	23					
			MS	22					

LOGIC ON SHEET CMC 4.1-04

12112 LOC: C14 NAME: C3F0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C14-24		T	A1	19	CONFLICT 3	18	T1	TP-40	
						17	T2	TERM	
						15	F1	P1B-31	
						16	F2	P1B-32	

12112 LOC: C14 NAME: C3F1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B11-3	C14-19		A1	24	CONFLICT 3	1	T1	TERM	
						2	T2	TERM	
						4	F1	P1B-33	
						3	F2	P1B-34	

12151 LOC: B11 NAME: BG3 △

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C8-14	F13-15		D1	2	CONFLICT 3	3	T1	C14-24	1
						4	F1	P1C-154	1
C11-1		T	D2	1	$P3_B$ REQUEST ENABLE 2	6	T2	A9-24	2
						5	F2	A02-24	1
C12-16		T	D3	20	IOU REQUEST ENABLE	8	T3	A9-6	2
						7	F3	A02-23	
F5-14		T	D4	19	COM MEM BUSY 4	12	T4	D9-5	2
						11	F4	B8-4	3
P1C-98		T	D5	18	REFR REQ.	14	T5	F11-5	
						13	F5	F07-18	
			D6				T6		
							F6		
D7-7	E13-24		C1	24					
			C2	23					
			MS	22					

LOGIC ON SHEET CMC 4.1-06

12112 LOC: B01 NAME: ARIF

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	24	•	1	T1	P1A-26	
						2	T2	P1A-24	
						3	F1	P1A-9	
						4	F2	P1A-10	
			A2	23	•	8	T3	P1A-22	
						7	T4	P1A-25	
						6	F3	P1A-12	
						5	F4	P1A-11	
			A3	20	•	11	T5	P1A-21	
						12	T6	P1A-19	
						13	F5	P1A-7	
						14	F6	P1A-6	
			A4	19	•	18	T7	P1A-29	
						17	T8	P1A-30	
						16	F7	P1A-4	
						15	F8	P1A-5	
D3-17	P1A-27		CX	22	• $P3_A$ REQUEST ENABLE 1				

12112 LOC: D01 NAME: RRIF

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	24	•	2	T1	P2A-6	
						1	T2	P2A-7	
						3	F1	TERM	
						4	F2	TERM	
			A2	23	•	8	T3	P2A-5	
						7	T4	P2A-4	
						6	F3	TERM	
						5	F4	TERM	
			A3	19	•	17	T5	P1A-39	
						18	T6	P1A-37	
						16	F5	TERM	
						15	F6	TERM	
			A4	20	•	11	T7	P2A-2	
						12	T8	P2A-1	
						13	F7	TERM	
						14	F8	TERM	
C2-15	P1A-40		CX	22	• REFRESH REQUEST ENABLE 1				

12112 LOC: E14 NAME: RR2F

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	20	•	11	T1	P2B-9	
						12	T2	P2B-10	
						13	F1	TERM	
						14	F2	TERM	
			A2	19	•	17	T3	P2B-12	
						18	T4	P2B-11	
						16	F3	TERM	
						15	F4	TERM	
			A3	23	•	8	T5	P2B-14	
						7	T6	P2B-15	
						6	F5	TERM	
						5	F6	TERM	
			A4	24	•	2	T7	P2B-17	
						1	T8	P2B-18	
						3	F7	TERM	
						4	F8	TERM	
C2-17	P2B-13		CX	22	• REFRESH REQUEST ENABLE 2				

12112 LOC: A14 NAME: CMRF

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	19	•	17	T1	P1B-3	
						18	T2	P1B-4	
						16	F1	TERM	
						15	F2	TERM	
			A2	20	•	12	T3	P1B-6	
						11	T4	P1B-7	
						13	F3	TERM	
						14	F4	TERM	
			A3	23	•	8	T5	P1B-9	
						7	T6	P1B-10	
						6	F5	TERM	
						5	F6	TERM	
			A4	24	•	2	T7	P1B-11	
						1	T8	P1B-12	
						3	F7	TERM	
						4	F8	TERM	
D12-11	P1B-8		CX	22	• COM MEM REQ ENABLE				

12112 LOC: D14 NAME: BRIF

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	20	•	11	T1	P1B-37	
						12	T2	P1B-38	
						13	F1	TERM	
						14	F2	TERM	
			A2	19	•	17	T3	P1B-39	
						18	T4	P1B-40	
						16	F3	TERM	
						15	F4	TERM	
			A3	23	•	8	T5	P2B-2	
						7	T6	P2B-3	
						6	F5	TERM	
						5	F6	TERM	
			A4	24	•	2	T7	P2B-4	
						1	T8	P2B-6	
						3	F7	TERM	
						4	F8	TERM	
B8-11	P2B-1		CX	22	• $P3_B$ REQUEST ENABLE 1				

12112 LOC: B14 NAME: BR2F

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	19	•	17	T1	P1B-19	
						18	T2	P1B-20	
						16	F1	TERM	
						15	F2	TERM	
			A2	20	•	12	T3	P1B-22	
						11	T4	P1B-23	
						13	F3	TERM	
						14	F4	TERM	
			A3	23	•	8	T5	P1B-24	
						7	T6	P1B-26	
						6	F5	TERM	
						5	F6	TERM	
			A4	24	•	2	T7	P1B-27	
						1	T8	P1B-28	
						3	F7	TERM	
						4	F8	TERM	
C14-23		T	CX	22	• GO COM MEM B				

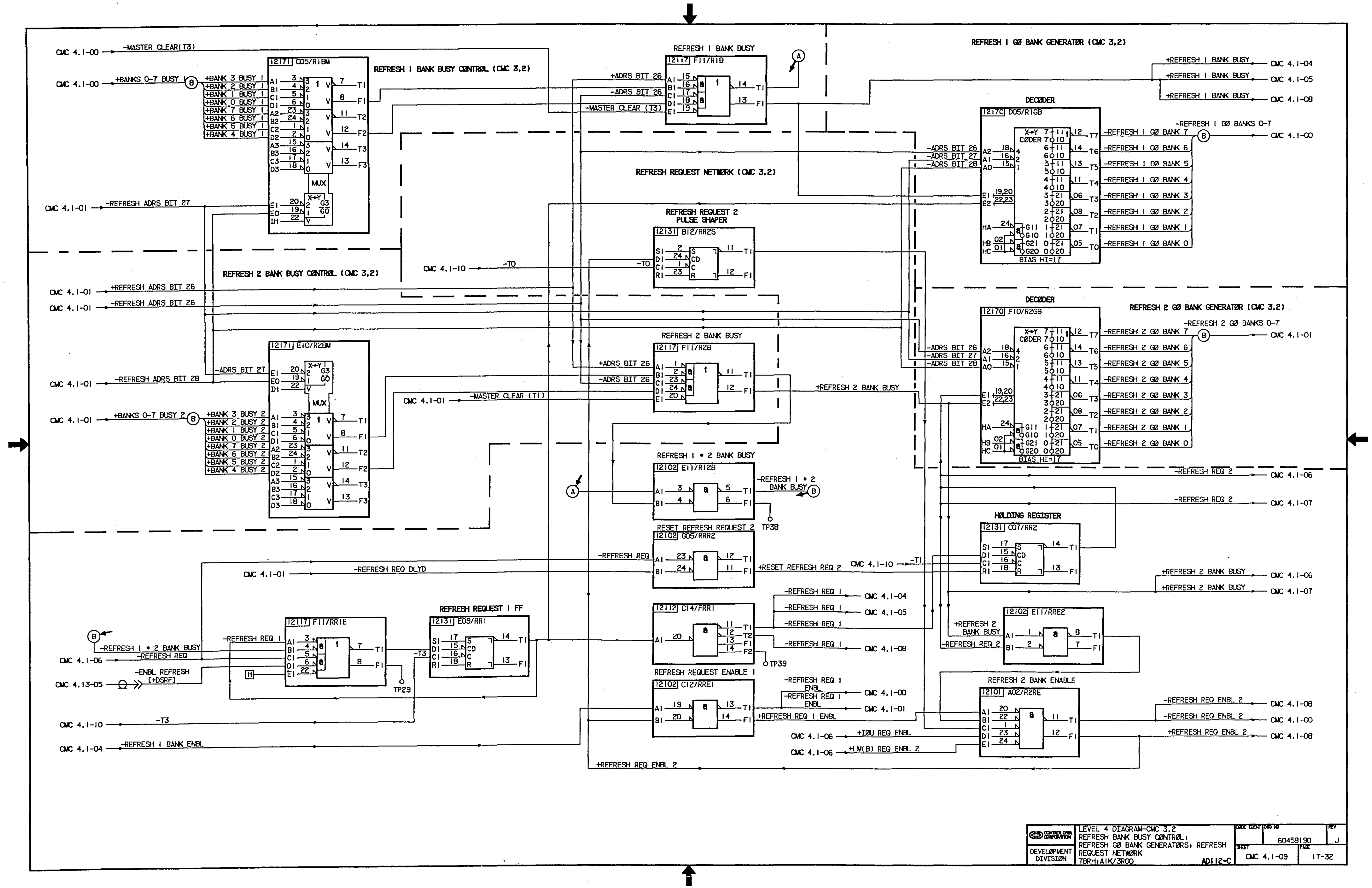
NOTES:

△ COMMON MEMORY CIRCUITRY NOT USED IN AD112-C.

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.1-02, 4.1-04, 4.1-06, 4.1-08
7BRH; A1K/3R00

AD112-C

DWG NO 60458190
REV J
SHEET CMC 4.1-08A
17-31


REFRESH 1 BANK BUSY CONTROL (CMC 3.2)
REFRESH 2 BANK BUSY CONTROL (CMC 3.2)
REFRESH REQUEST NETWORK (CMC 3.2)
REFRESH 1 GO BANK GENERATOR (CMC 3.2)
REFRESH 2 GO BANK GENERATOR (CMC 3.2)
REFRESH 1 BANK BUSY
REFRESH 2 BANK BUSY
REFRESH 1 • 2 BANK BUSY
REFRESH REQUEST 2 PULSE SHAPER
RESET REFRESH REQUEST 2
REFRESH REQUEST 1 FF
REFRESH REQUEST ENABLE 1
REFRESH 2 BANK ENABLE
HOLDING REGISTER
DECODER
MUX
12171 C05/R1BM
12171 E10/R2BM
12117 F11/R1B
12117 F11/R2B
12131 B12/RR2S
12102 E11/R12B
12102 G05/RRR2
12117 F11/RR1E
12131 E09/RR1
12112 C14/FRR1
12102 C12/RRE1
12170 D05/R1GB
12170 F10/R2GB
12131 C07/RR2
12102 E11/RRE2
12101 A02/R2RE
CMC 4.1-00 -MASTER CLEAR(T3)
CMC 4.1-00 +BANKS 0-7 BUSY 1
CMC 4.1-01 -REFRESH ADRS BIT 27
CMC 4.1-01 +REFRESH ADRS BIT 26
CMC 4.1-01 -REFRESH ADRS BIT 26
CMC 4.1-01 -REFRESH ADRS BIT 28
CMC 4.1-01 +BANKS 0-7 BUSY 2
CMC 4.1-01 -MASTER CLEAR (T1)
CMC 4.1-10 -T0
CMC 4.1-10 -T1
CMC 4.1-01 -REFRESH REQ DLYD
CMC 4.1-06 -REFRESH REQ
CMC 4.13-05 -ENBL REFRESH [+DSRF]
CMC 4.1-10 -T3
CMC 4.1-04 -REFRESH 1 BANK ENBL
-REFRESH 1 • 2 BANK BUSY
+REFRESH 1 BANK BUSY CMC 4.1-04
+REFRESH 1 BANK BUSY CMC 4.1-05
+REFRESH 1 BANK BUSY CMC 4.1-08
-REFRESH 1 GO BANKS 0-7 CMC 4.1-00
-REFRESH 2 GO BANKS 0-7 CMC 4.1-01
-REFRESH REQ 2 CMC 4.1-06
-REFRESH REQ 2 CMC 4.1-07
+REFRESH 2 BANK BUSY CMC 4.1-06
+REFRESH 2 BANK BUSY CMC 4.1-07
-REFRESH REQ 1 CMC 4.1-04
-REFRESH REQ 1 CMC 4.1-05
-REFRESH REQ 1 CMC 4.1-08
-REFRESH REQ 1 ENBL CMC 4.1-00
-REFRESH REQ 1 ENBL CMC 4.1-01
+REFRESH REQ 1 ENBL
CMC 4.1-06 +IOU REQ ENBL
CMC 4.1-06 +LM(B) REQ ENBL 2
-REFRESH REQ ENBL 2 CMC 4.1-08
-REFRESH REQ ENBL 2 CMC 4.1-00
+REFRESH REQ ENBL 2 CMC 4.1-08
+REFRESH REQ ENBL 2
+RESET REFRESH REQ 2
+REFRESH 2 BANK BUSY
TP38
TP39
TP29
BIAS HI=17

CONTROL DATA CORPORATION

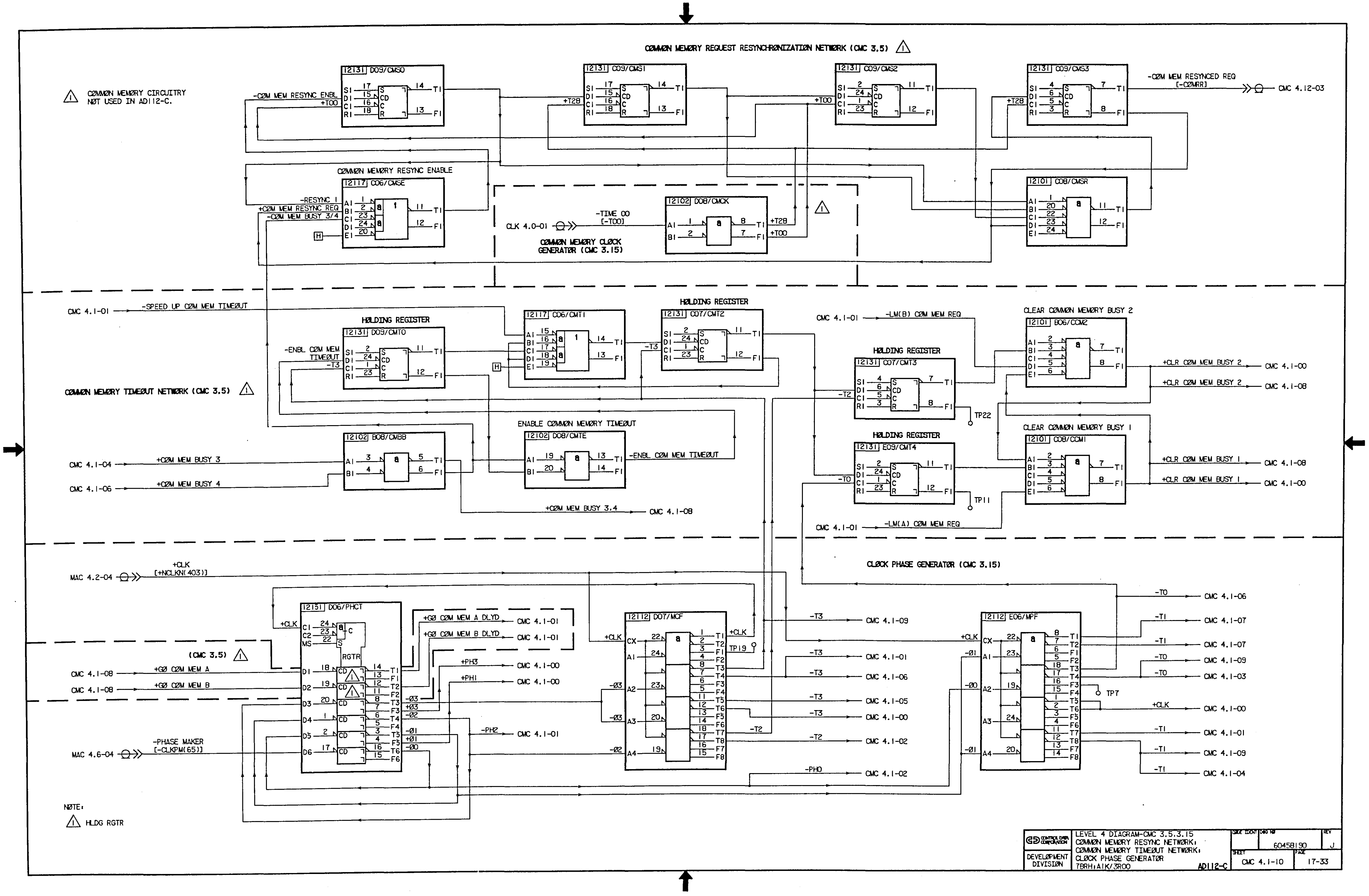
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.2
REFRESH BANK BUSY CONTROL;
REFRESH GO BANK GENERATORS; REFRESH
REQUEST NETWORK
7BRH;A1K/3R00

AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.1-09	17-32



CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CMC 3.5.3.15
CØMMØN MEMØRY RESYNC NETWØRK;
CØMMØN MEMØRY TIMEØUT NETWØRK;
CLØCK PHASE GENERATØR
7BRH;A1K/3R00
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.1-10	17-33

LEFT ZIF △1

BIT NAME	I/Ø	SHEET	TYPE	VIRTUAL PIN	REAL PIN
GØBE (0)	Ø	00	D	R80	P2A-39
GØBEP (0)				88	40
(1)				81	37
(1)				89	35
(2)				82	36
(2)				8A	34
(3)				83	31
(3)				8B	32
(4)				84	29
(4)				8C	30
(5)				85	27
(5)				8D	25
(6)				86	26
↓ (6)				8E	24
GØBE (7)				87	21
GØBEP (7)				8F	22
RFRQ		↓	↓	90	↓ 19
RERQP		00	D	91	P2A-20
RFRQE1 (0)		08	Z	92	P1A-40
(1)				93	↓ 39
(2)				94	P1A-37
(3)				95	P2A-01
(4)				96	02
(5)				97	04
(6)				98	05
↓ (7)		↓		99	↓ 06
RFRQE1 (8)		08		9A	P2A-07
ARE		04		A4	P1A-01
ARE1 (0)		08		A5	19
(1)				A6	21
(2)				A7	22
(3)				A8	24
(4)				A9	25
(5)				AA	26
(6)				AB	27
↓ (7)				AC	29
ARE1 (8)				AD	30
ARE1P (0)				AE	04
(1)				AF	05
(2)				B0	06
(3)				B1	07
(4)				B2	09
(5)				B3	10
(6)				B4	11
↓ (7)	↓	↓	↓	↓B5	↓ 12
ARE1P (8)	Ø	08	Z	R86	P1A-14
EREQE	Ø	04	Z	RCE	P1A-02
ERAE		02	↓	CF	↓ 15
EPTBSY		02	Z	D0	P1A-16
RRIM	↓	00	D	E2	P2A-14
RRIMP	Ø	00	D	E3	↓ 12
NIM	I	02	Z	29	P2A-11
APTDBL		04		2D	P1A-36
EPTDBL		05		2F	P2A-09
MCLRP1		01		31	P1A-35
HSM		06		42	34
EREQ1		02		14	17
EREQ1P	↓	02		15	↓ 20
RESREF	I	05		44	P1A-31
RFRQE	Ø	00	↓	↓E9	P2A-10
ENEHS	I	02	Z	R45	P2A-17

ZIF GRØUND PINS			
P1A-03	P1A-23	P2A-03	P2A-23
P1A-08	P1A-28	P2A-08	P2A-28
P1A-13	P1A-33	P2A-13	P2A-33
P1A-18	P1A-38	P2A-18	P2A-38

NØTE:

△1 CØNNECTØR TYPES
C = CØAX
D = DIFFERENTIAL
Z = ZIF TØ FØIL ØN INTERCØNNECT BØARD.

CØAX △1

BIT NAME	I/Ø	SHEET	TYPE	VIRTUAL PIN	REAL PIN
NCLKN (403)	I	10	C	R00	P1C-80
CLKPM (65)		↓		01	97
T00		10		02	106
LMREQA		08		03	67
LMREQB		04		04	71
LMADR		08		05	64
LMADRP		04		06	23
LMADR (1)		00		07	44
↓ (2)	↓	↓	↓	↓08	↓ 40
LMADR (3)	I	00	C	R09	P1C-39
BREQP	I	06	C	R0B	P1C-174
BA01P	I	06	C	R0D	P1C-122
BBCADR (0)		01		0E	165
(1)				0F	161
(2)				10	166
(3)				11	162
↓ (4)		↓		12	158
BBCADR (5)	↓	01	↓	↓13	↓ 169
CLRCNF	I	00	C	R43	P1C-24
EBCADR (0)	I	02	C	R16	P1C-36
(1)				17	31
(2)				18	28
(3)				19	35
↓ (4)	↓	↓	↓	↓1A	↓ 32
EBCADR (5)	I	02	C	R1B	P1C-27
IBCADR (0)	I	01	C	R1E	P1C-141
(1)				1F	137
(2)				20	130
(3)				21	142
↓ (4)		↓		22	138
IBCADR (5)		01		23	134
REFREQ	↓	06	↓	↓24	↓ 98
RFADR (26)	I	01	C	R25	P1C-101
RFADR (27)	I	01	C	R27	P1C-72
RFADR (28)		01		28	76
EXTCMB		00		2A	114
ALCMR	↓	04		2B	60
BLCMR	I	06		2C	121
CØMRR	Ø	10		D4	113
CBSY3		04		DE	04
CBSY3P		04		DF	68
CBSY4		06		E0	110
CBSY4P		↓		E1	105
CNFLC3	↓	06		E4	154
CMBSYP	Ø	04	↓	↓B8	↓ 03
DSRF	I	09	C	R46	P1C-170

RIGHT ZIF △1

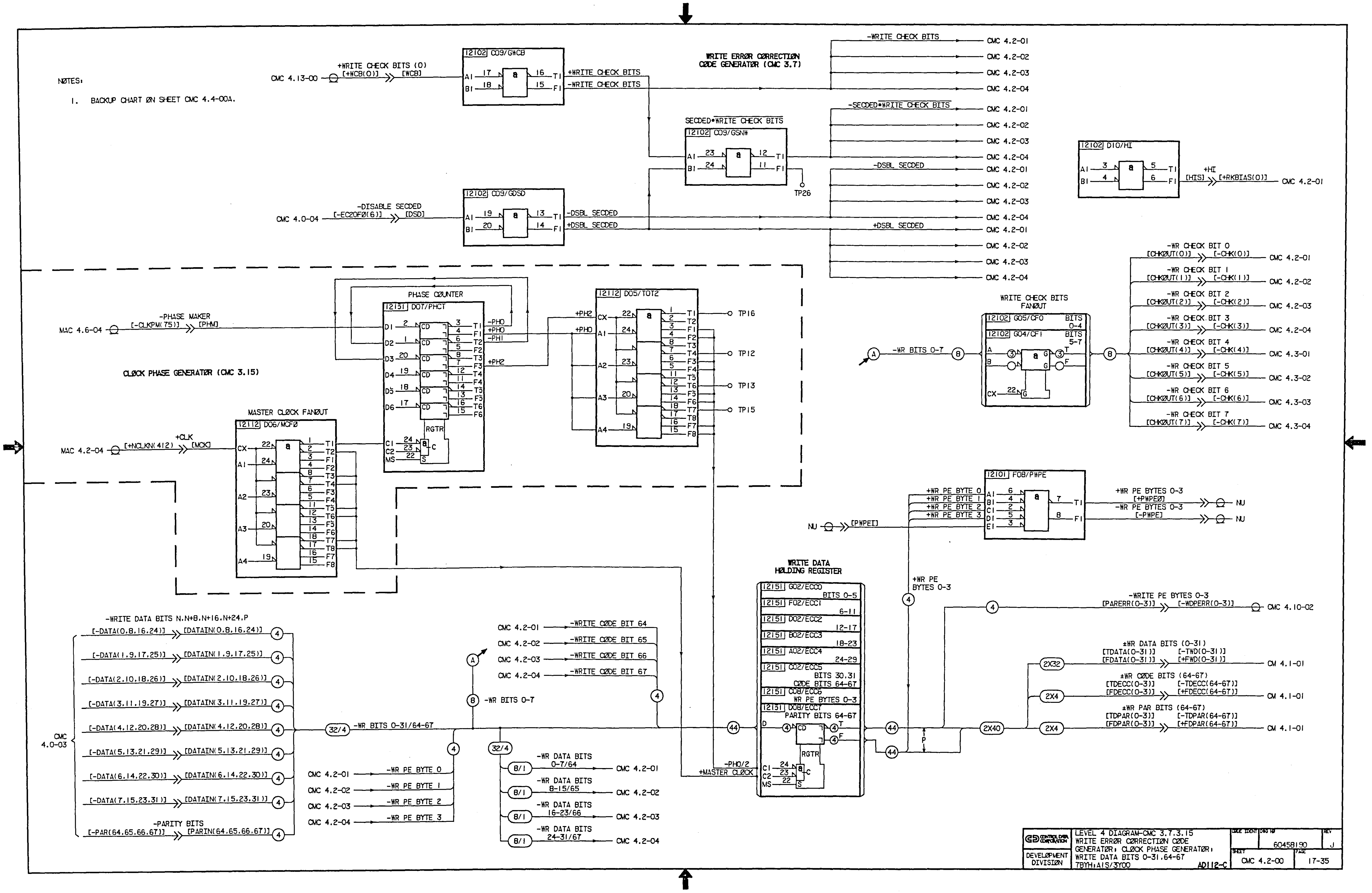
BIT NAME	I/Ø	SHEET	TYPE	VIRTUAL PIN	REAL PIN
CLRBB (0)	I	01	D	R32	P2B-39
CLRBBP (0)				3A	40
(1)				33	37
(1)				3B	38
(2)				34	33
(2)				3C	34
(3)				35	31
(3)				3D	32
(4)				36	29
(4)				3E	30
(5)				37	27
(5)				3F	28
(6)				38	23
↓ (6)				40	24
CLRBB (7)	↓	↓	↓	39	21
CLRBBP (7)	I	01	D	41	22
RFRQE2 (0)	Ø	08	Z	9B	18
(1)				9C	17
(2)				9D	15
(3)				9E	14
(4)				9F	13
(5)				A0	12
(6)				A1	11
↓ (7)				A2	10
RFRQE2 (8)				A3	09
BRE1 (0)				B9	06
(1)				BA	04
(2)				BB	03
(3)				BC	↓ 02
(4)				BD	P2B-01
(5)				BE	P1B-40
(6)				BF	39
↓ (7)				C0	38
BRE1 (8)				C1	37
BRE2 (0)				C2	28
(1)				C3	27
(2)				C4	26
(3)				C5	24
(4)				C6	23
(5)				C7	22
(6)				C8	21
↓ (7)		↓		C9	20
BRE2 (8)		08	↓	CA	↓ 19
BRE		06	Z	CB	P1B-01
CBBSY			D	CC	P2B-19
CBBSYP		↓	D	CD	P2B-20
IREQE		06	Z	D1	P1B-02
IRAE		03		D2	13
IPTBSY		03		D3	14
△1 CØMRQE (0)		08		D5	12
(1)				D6	11
(2)				D7	10
(3)				D8	09
(4)				D9	08
(5)				DA	07
(6)				DB	06
↓ (7)				DC	04
CØMRQE (8)				DD	03
CNFLC3 (1)				E5	31
(2)				E6	32
↓ (3)	↓	↓		E7	33
CNFLC3 (4)	Ø	08		E8	↓ 34
BPTDBL	I	06		2E	P1B-29
IPTDBL		07		30	P2B-07
IREQ1	↓	03	↓	↓1C	P1B-17
IREQ1P	I	03	Z	R1D	P1B-18

ZIF GRØUND PINS			
P1B-05	P1B-25	P2B-05	P2B-25
P1B-16	P1B-36	P2B-16	P2B-36

NØTE:

△1 CØMMØN MEMØRY CIRCUITRY NØT USED IN AD112-C.

CONTROL DATA CORPORATION	LEVEL 4 CØNNECTØR CHART SUPPLEMENTAL WIRING INFØRMATIØN	CAGE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	7BRH,A1K/3R00 AD112-C	SHEET CMC 4.1-CC	PAGE 17-34	


NØTES:
1. BACKUP CHART ØN SHEET CMC 4.4-00A.
WRITE ERRØR CØRRECTIØN CØDE GENERATØR (CMC 3.7)
CLØCK PHASE GENERATØR (CMC 3.15)
12102 C09/GWCB
12102 C09/GSNW
12102 C09/GDSD
12102 D10/HI
12131 D07/PHCT
PHASE CØUNTER
12112 D05/TOT2
12112 D06/MCFØ
MASTER CLØCK FANØUT
WRITE CHECK BITS FANØUT
12102 G05/CF0
12102 G04/CF1
12101 F08/PWPE
WRITE DATA HØLDING REGISTER
12151 G02/ECC0 BITS 0-5
12151 F02/ECC1 6-11
12151 D02/ECC2 12-17
12151 B02/ECC3 18-23
12151 A02/ECC4 24-29
12151 C02/ECC5 BITS 30,31 CØDE BITS 64-67
12151 C08/ECC6 WR PE BYTES 0-3
12151 D08/ECC7 PARITY BITS 64-67
+WRITE CHECK BITS (0) [+WCB(0)] [WCB] CMC 4.13-00
-DISABLE SECDED [-EC2OFØ(6)] [DSD] CMC 4.0-04
-WRITE CHECK BITS CMC 4.2-01 CMC 4.2-02 CMC 4.2-03 CMC 4.2-04
SECDED•WRITE CHECK BITS
-SECDED•WRITE CHECK BITS CMC 4.2-01 CMC 4.2-02 CMC 4.2-03 CMC 4.2-04
-DSBL SECDED CMC 4.2-01 CMC 4.2-02 CMC 4.2-03 CMC 4.2-04
+DSBL SECDED CMC 4.2-01 CMC 4.2-02 CMC 4.2-03 CMC 4.2-04
TP26
+HI [HIS] [+RKBIAS(0)] CMC 4.2-01
-PHASE MAKER [-CLKPM(75)] [PHM] MAC 4.6-04
+CLK [+NCLKN(412)] [MCK] MAC 4.2-04
-PH0 +PH0 -PH1 +PH2
TP16 TP12 TP13 TP15
-WR BITS 0-7
-WR CHECK BIT 0 [CHKØUT(0)] [-CHK(0)] CMC 4.2-01
-WR CHECK BIT 1 [CHKØUT(1)] [-CHK(1)] CMC 4.2-02
-WR CHECK BIT 2 [CHKØUT(2)] [-CHK(2)] CMC 4.2-03
-WR CHECK BIT 3 [CHKØUT(3)] [-CHK(3)] CMC 4.2-04
-WR CHECK BIT 4 [CHKØUT(4)] [-CHK(4)] CMC 4.3-01
-WR CHECK BIT 5 [CHKØUT(5)] [-CHK(5)] CMC 4.3-02
-WR CHECK BIT 6 [CHKØUT(6)] [-CHK(6)] CMC 4.3-03
-WR CHECK BIT 7 [CHKØUT(7)] [-CHK(7)] CMC 4.3-04
+WR PE BYTE 0 +WR PE BYTE 1 +WR PE BYTE 2 +WR PE BYTE 3
NU [PWPEI]
+WR PE BYTES 0-3 [+PWPEØ] NU
-WR PE BYTES 0-3 [-PWPE] NU
+WR PE BYTES 0-3
-WRITE PE BYTES 0-3 [PARERR(0-3)] [-WDPERR(0-3)] CMC 4.10-02
±WR DATA BITS (0-31) [TDATA(0-31)] [-TWD(0-31)] [FDATA(0-31)] [+FWD(0-31)] CM 4.1-01
±WR CØDE BITS (64-67) [TDECC(0-3)] [-TDECC(64-67)] [FDECC(0-3)] [+FDECC(64-67)] CM 4.1-01
±WR PAR BITS (64-67) [TDPAR(0-3)] [-TDPAR(64-67)] [FDPAR(0-3)] [+FDPAR(64-67)] CM 4.1-01
-WRITE DATA BITS N,N+8,N+16,N+24,P
CMC 4.0-03
[-DATA(0,8,16,24)] [DATAIN(0,8,16,24)]
[-DATA(1,9,17,25)] [DATAIN(1,9,17,25)]
[-DATA(2,10,18,26)] [DATAIN(2,10,18,26)]
[-DATA(3,11,19,27)] [DATAIN(3,11,19,27)]
[-DATA(4,12,20,28)] [DATAIN(4,12,20,28)]
[-DATA(5,13,21,29)] [DATAIN(5,13,21,29)]
[-DATA(6,14,22,30)] [DATAIN(6,14,22,30)]
[-DATA(7,15,23,31)] [DATAIN(7,15,23,31)]
-PARITY BITS [-PAR(64,65,66,67)] [PARIN(64,65,66,67)]
CMC 4.2-01 -WRITE CØDE BIT 64
CMC 4.2-02 -WRITE CØDE BIT 65
CMC 4.2-03 -WRITE CØDE BIT 66
CMC 4.2-04 -WRITE CØDE BIT 67
-WR BITS 0-7
-WR BITS 0-31/64-67
CMC 4.2-01 -WR PE BYTE 0
CMC 4.2-02 -WR PE BYTE 1
CMC 4.2-03 -WR PE BYTE 2
CMC 4.2-04 -WR PE BYTE 3
-WR DATA BITS 0-7/64 CMC 4.2-01
-WR DATA BITS 8-15/65 CMC 4.2-02
-WR DATA BITS 16-23/66 CMC 4.2-03
-WR DATA BITS 24-31/67 CMC 4.2-04
-PH0/2 +MASTER CLØCK
RGTR

CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CMC 3.7.3.15
WRITE ERRØR CØRRECTIØN CØDE
GENERATØR, CLØCK PHASE GENERATØR,
WRITE DATA BITS 0-31,64-67
7BYH,A1S/3Y00 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.2-00	17-35

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12151 LOC: G02 NAME: ECC0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G05-17		T	D1	17	DATA	16	T1	P2A-28	
					BIT 0	15	F1	P2A-29	
G05-19		T	D2	18	BIT 1	14	T2	P2A-30	
						13	F2	P2A-31	
G05-23		T	D3	20	BIT 2	8	T3	P2A-34	
						7	F3	P2A-35	
G05-1		T	D4	1	BIT 3	6	T4	P2A-37	
						5	F4	P2A-38	
G05-3		T	D5	2	BIT 4	3	T5	P2A-39	
						4	F5	P2A-40	
G04-17		T	D6	19	BIT 5	12	T6	P2A-32	
						11	F6	P2A-33	
D05-3		T	C1	24	NOTE: C1 FROM TOT2, PIN F1				
D06-7		T	C2	23	C2 FROM MCF0, PIN T4				
			MS	22					

12151 LOC: F02 NAME: ECC1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G04-23		T	D1	1	DATA	6	T1	P2A-21	
					BIT 6	5	F1	P2A-22	
G04-19		T	D2	2	BIT 7	3	T2	P2A-27	
						4	F2	P2A-26	
E14-17		T	D3	20	BIT 8	8	T3	P2A-23	
						7	F3	P2A-24	
E12-17		T	D4	19	BIT 9	12	T4	P2A-19	
						11	F4	P2A-20	
E12-2		T	D5	17	BIT 10	16	T5	P2A-14	
						15	F5	P2A-15	
E12-1		T	D6	18	BIT 11	14	T6	P2A-17	
						13	F6	P2A-18	
D05-4		T	C1	24	NOTE: C1 FROM TOT2, PIN F2				
D06-8		T	C2	23	C2 FROM MCF0, PIN T3				
			MS	22					

12151 LOC: D02 NAME: ECC2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E13-1		T	D1	20	DATA	8	T1	P2A-8	
					BIT 12	7	F1	P2A-9	
E12-19		T	D2	19	BIT 13	12	T2	P2A-6	
						11	F2	P2A-7	
E12-23		T	D3	2	BIT 14	3	T3	P2A-13	
						4	F3	P2A-12	
E12-20		T	D4	1	BIT 15	6	T4	P2A-10	
						5	F4	P2A-11	
B14-17		T	D5	17	BIT 16	16	T5	P2A-1	
						15	F5	P2A-2	
B12-17		T	D6	18	BIT 17	14	T6	P2A-4	
						13	F6	P2A-3	
D05-15		T	C1	24	NOTE: C1 FROM TOT2, PIN F8				
D06-12		T	C2	23	C2 FROM MCF0, PIN T6				
			MS	22					

12151 LOC: B02 NAME: ECC3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B12-2		T	D1	20	DATA	8	T1	P1A-21	
					BIT 18	7	F1	P1A-22	
B12-1		T	D2	1	BIT 19	6	T2	P1A-23	
						5	F2	P1A-24	
B13-1		T	D3	2	BIT 20	3	T3	P1A-27	
						4	F3	P1A-26	
B12-19		T	D4	17	BIT 21	16	T4	P1A-14	
						15	F4	P1A-15	
B12-23		T	D5	19	BIT 22	12	T5	P1A-19	
						11	F5	P1A-20	
B12-20		T	D6	18	BIT 23	14	T6	P1A-18	
						13	F6	P1A-17	
D05-14		T	C1	24	NOTE: C1 FROM TOT2, PIN F6				
D06-17		T	C2	23	C2 FROM MCF0, PIN T8				
			MS	22					

12151 LOC: A02 NAME: ECC4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A14-17		T	D1	17	DATA	16	T1	P1A-1	
					BIT 24	15	F1	P1A-2	
A12-17		T	D2	18	BIT 25	14	T2	P1A-3	
						13	F2	P1A-4	
A12-2		T	D3	19	BIT 26	12	T3	P1A-6	
						11	F3	P1A-7	
A12-1		T	D4	2	BIT 27	3	T4	P1A-13	
						4	F4	P1A-12	
A13-1		T	D5	1	BIT 28	6	T5	P1A-10	
						5	F5	P1A-11	
A12-19		T	D6	20	BIT 29	8	T6	P1A-9	
						7	F6	P1A-8	
D05-13		T	C1	24	NOTE: C1 FROM TOT2, PIN F5				
D06-18		T	C2	23	C2 FROM MCF0, PIN T7				
			MS	22					

12151 LOC: C02 NAME: ECC5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A12-23		T	D1	17	DATA	16	T1	P1A-28	
					BIT 30	15	F1	P1A-29	
A12-20		T	D2	18	BIT 31	14	T2	P1A-31	
						13	F2	P1A-30	
F08-12		T	D3	1	CODE	6	T3	P1A-37	
					BIT 64	5	F3	P1A-38	
E08-12		T	D4	2	CODE	3	T4	P1A-40	
					BIT 65	4	F4	P1A-39	
B08-12		T	D5	19	CODE	12	T5	P1A-32	
					BIT 66	11	F5	P1A-33	
A08-12		T	D6	20	CODE	8	T6	P1A-35	
					BIT 67	7	F6	P1A-34	
D05-5		T	C1	24	NOTE: C1 FROM TOT2, PIN F4				
D06-11		T	C2	23	C2 FROM MCF0, PIN T5				
			MS	22					

12151 LOC: C08 NAME: ECC6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D10-12		T	D1	20	WR PE	8	T1	P1C-98	
					BYTE 0	7	F1	F08-06	
D10-13		T	D2	19	WR PE	12	T2	P1C-97	
					BYTE 1	11	F2	F08-04	
C10-13		T	D3	17	WR PE	16	T3	P1C-106	
					BYTE 2	15	F3	F08-02	
C10-12		T	D4	18	WR PE	14	T4	P1C-105	
					BYTE 3	13	F4	F08-05	
			D5	1		6	T5		
						5	F5		
			D6	2		3	T6		
						4	F6		
D05-16		T	C1	24	NOTE: C1 FROM TOT2, PIN F7				
D06-2	D08-23		C2	23	C2 FROM MCF0, PIN T2				
			MS	22					

12151 LOC: D08 NAME: ECC7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F08-16		T	D1	1	PARITY	6	T1	P1B-28	
					BIT 64	5	F1	P1B-27	
E08-16		T	D2	2	PARITY	3	T2	P1B-30	
					BIT 65	4	F2	P1B-29	
B08-16		T	D3	18	PARITY	14	T3	P1B-32	
					BIT 66	13	F3	P1B-31	
A08-16		T	D4	17	PARITY	16	T4	P1B-34	
					BIT 67	15	F4	P1B-33	
			D5	19		12	T5		
						11	F5		
			D6	20		8	T6		
						7	F6		
D05-6		T	C1	24	NOTE: C1 FROM TOT2, PIN F3				
C08-23		T	C2	23	C2 FROM MCF0, PIN T2				
			MS	22					

12102 LOC: G05 NAME: CF0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F14-17	G02-17		A1	17	WR CHECK	16	T1	P2B-3	
			B1	18	BIT 0	15	F1	TERM	
F12-17	G02-18		A2	19	WR CHECK	13	T2	P2B-1	
			B2	20	BIT 1	14	F2	TERM	
F12-2	G02-20		A3	23	WR CHECK	12	T3	P2B-6	
			B3	24	BIT 2	11	F3	TERM	
F12-1	G02-1		A4	1	WR CHECK	8	T4	P2B-15	
			B4	2	BIT 3	7	F4	TERM	
F13-1	G02-2		A5	3	WR CHECK	5	T5	P2B-8	
			B5	4	BIT 4	6	F5	TERM	
			CX	22					

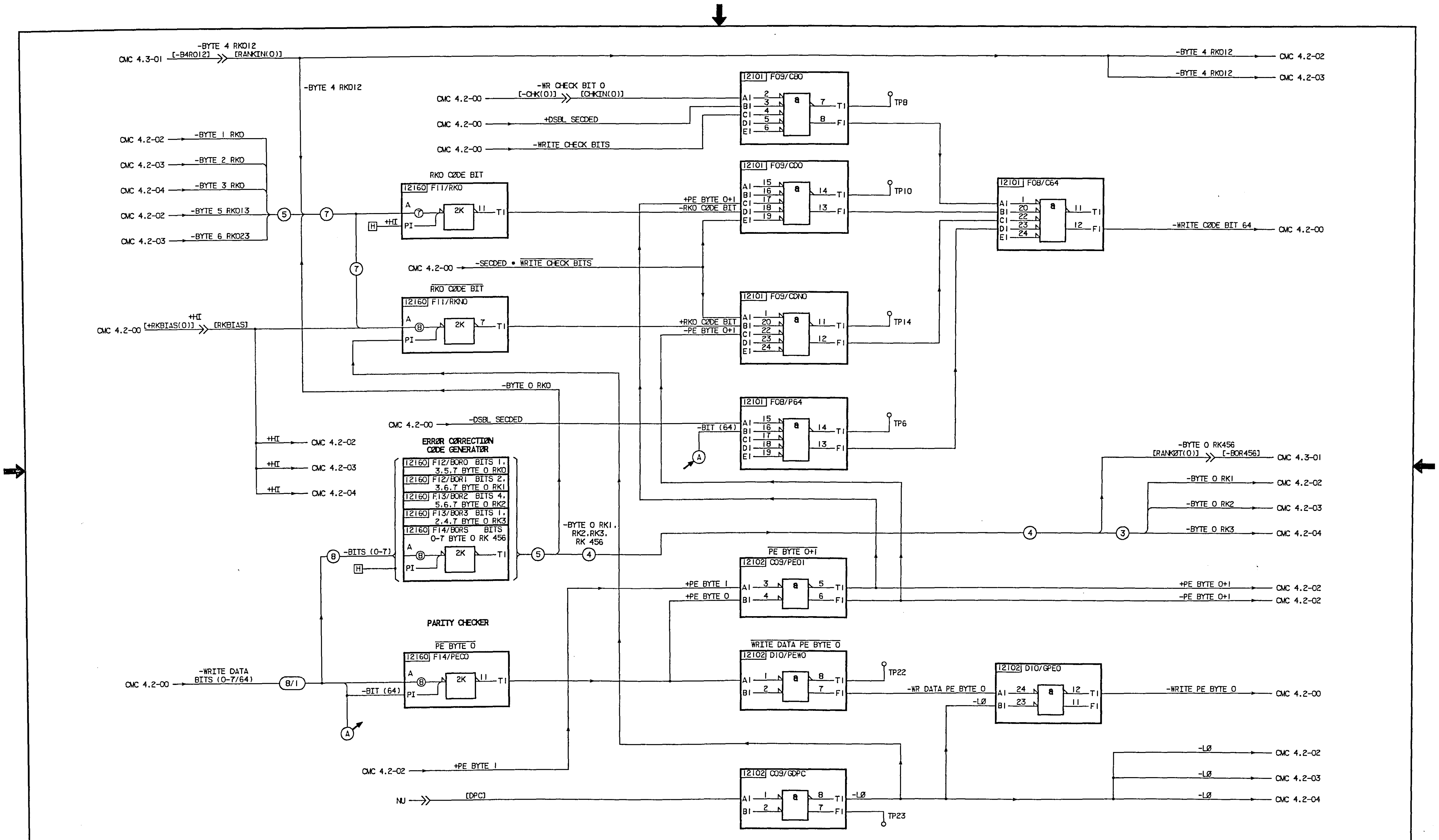
12102 LOC: G04 NAME: CF1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F12-19	G02-19		A1	17	WR CHECK	16	T1	P2B-10	
			B1	18	BIT 5	15	F1	TERM	
F12-23	F02-1		A2	23	WR CHECK	12	T2	P2B-14	
			B2	24	BIT 6	11	F2	TERM	
F12-20	F02-2		A3	19	WR CHECK	13	T3	P2B-12	
			B3	20	BIT 7	14	F3	TERM	
			A4	1		8	T4		
			B4	2		7	F4		
			A5	3		5	T5		
			B5	4		6	F5		
			CX	22					

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.2-00
7BYH: A13/3Y00 AD112-C

CODE IDENT		DWG NO	REV
34010	D	60458190	J
		SHEET CMC 4.2-00A	17-36



NOTES:

1. BACKUP CHART ON SHEET CMC 4.2-01A.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.7 WRITE ERROR CORRECTION CODE GENERATOR BYTE 0 7BYH:AIS/3Y00	CODE IDENT	DWG NO 60458190		REV J
DEVELOPMENT DIVISION	AD112-C	SHEET CMC 4.2-01		PAGE 17-37	

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12160 LOC: F11 NAME: RKO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F12-11	F11-22		A1	20	BYTE 0 RKO	11	T1	F9-18	
F11-24		T	A2	18	BYTE 1 RKO				
B12-11	F11-5		A3	13	BYTE 2 RKO				
A12-11	F11-4		A4	14	BYTE 3 RKO				
F11-2	E11-5		A5	16	BYTE 4 RK012				
F11-1	E11-4		A6	17	BYTE 5 RK013				
F11-23		T	A7	19	BYTE 6 RK023				
			A8	15					
TIE-HI			P1	12	+HI				

12160 LOC: F11 NAME: RKNO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F11-20		T	A1	22	BYTE 0 RKO	7	T1	F9-20	
E12-11	F11-18		A2	24	BYTE 1 RKO				
F11-13		T	A3	5	BYTE 2 RKO				
F11-14		T	A4	4	BYTE 3 RKO				
P2B-38	F11-16		A5	2	BYTE 4 RK012				
P2B-40	F11-17		A6	1	BYTE 5 RK013				
B11-1	F11-19		A7	23	BYTE 6 RK023				
E11-3		T	A8	3	+HI				
D10-20	E11-6		P1	6	-L0				

12160 LOC: F12 NAME: BORO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-15	G05-19		A1	17	BIT 1	11	T1	F11-20	
F14-14	F12-1		A2	18	BIT 3				
F13-24	G04-17		A3	19	BIT 5				
F12-22	G04-19		A4	20	BIT 7				
			A5						
			A6						
			A7						
			A8						
F13-12	F11-12		P1	12	+HI				

12160 LOC: F12 NAME: BOR1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-17	G05-23		A1	2	BIT 2	7	T1	E11-1	
F12-18	G05-1		A2	1	BIT 3				
F13-23	G04-23		A3	23	BIT 6				
F13-20	F12-20		A4	22	BIT 7				
			A5						
			A6						
			A7						
			A8						
TIE-HI			P1	6	+HI				

12160 LOC: F13 NAME: BOR2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-18	G05-3		A1	1	BIT 4	7	T1	B11-22	
F14-18	F12-19		A2	24	BIT 5				
F14-19	F12-23		A3	23	BIT 6				
F14-20	F13-20		A4	22	BIT 7				
			A5						
			A6						
			A7						
			A8						
F14-6	F12-6		P1	6	+HI				

12160 LOC: F13 NAME: BOR3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F14-16	F12-17		A1	15	BIT 1	11	T1	A11-1	
F14-15	F12-2		A2	17	BIT 2				
F14-13	F13-1		A3	18	BIT 4				
F13-22	F12-22		A4	20	BIT 7				
			A5						
			A6						
			A7						
			A8						
TIE-HI	F12-12		P1	12	+HI				

12160 LOC: F14 NAME: BORS

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P2B-35	F14-17		A1	1	BIT 0	7	T1	P2B-37	
P2B-34	F14-16		A2	2	BIT 1				
P2B-33	F14-15		A3	3	BIT 2				
P2B-32	F14-14		A4	4	BIT 3				
P2B-31	F14-13		A5	5	BIT 4				
P2B-30	F14-18		A6	24	BIT 5				
P2B-29	F14-19		A7	23	BIT 6				
P2B-28	F14-20		A8	22	BIT 7				
TIE-HI	F13-6		P1	6	+HI				

12160 LOC: F14 NAME: PECO

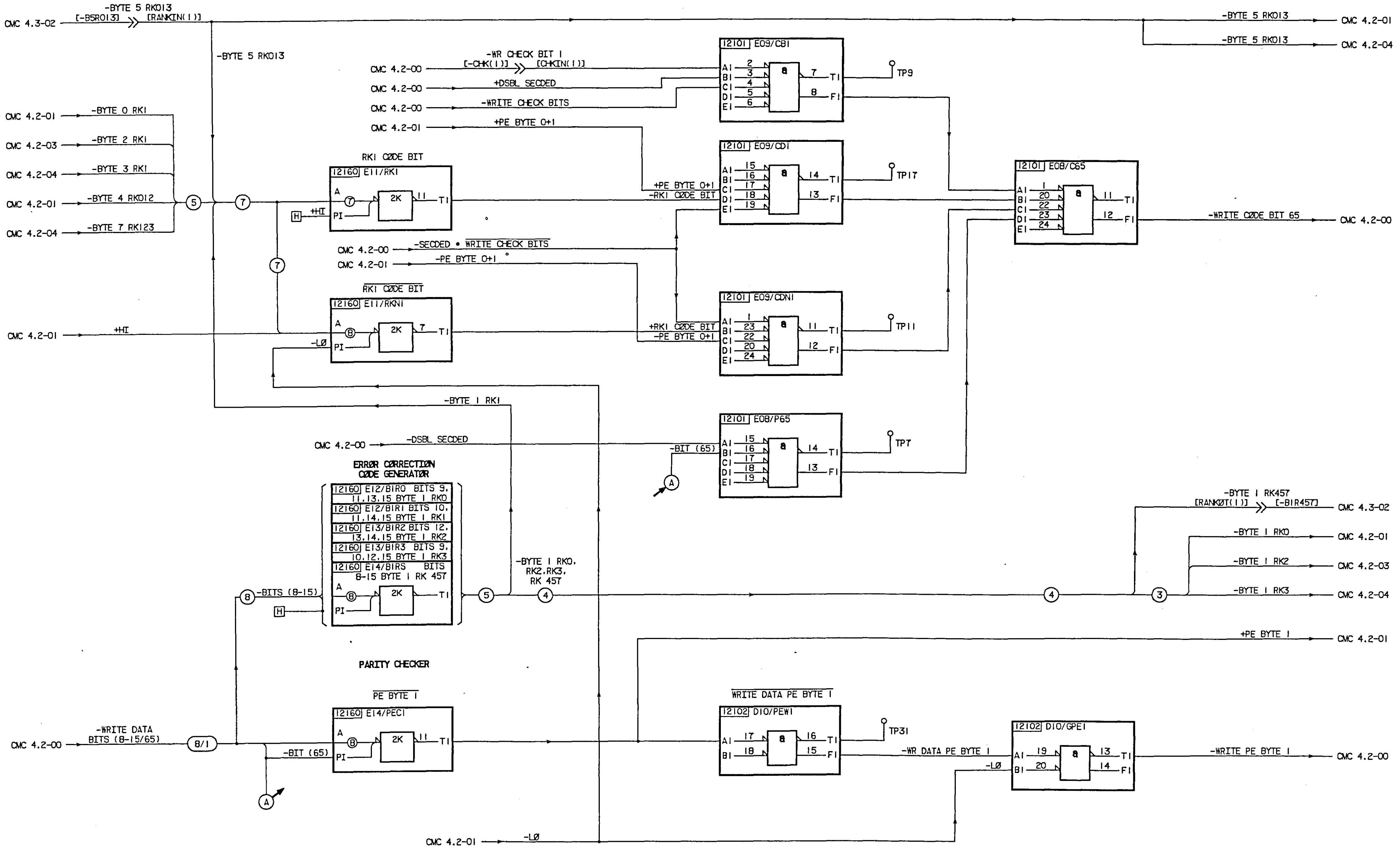
SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F14-1	G05-17		A1	17	BIT 0	11	T1	D10-1	
F14-2	F13-15		A2	16	BIT 1				
F14-3	F13-17		A3	15	BIT 2				
F14-4	F12-18		A4	14	BIT 3				
F14-5	F13-18		A5	13	BIT 4				
F14-24	F13-24		A6	18	BIT 5				
F14-23	F13-23		A7	19	BIT 6				
F14-22	F13-22		A8	20	BIT 7				
P2B-27	F08-16		P1	12	BIT 64				

BIT 64 IS
BYTE 0 PARITY

ARDEN HILLS
OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.2-01
7BYH; A13/3Y00 AD112 – C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.2-01A
17– 38



NØTES:

1. BACKUP CHART ØN SHEET CMC 4.2-02A.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.7 WRITE ERRØR CØRRECTIØN CØDE GENERATØR BYTE 1 7BYH:A1S/3Y00	CODE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	AD112-C	SHEET CMC 4.2-02	PAGE 17-39	

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12160 LOC: E11 NAME: RK1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E11-1		T	A1	17	BYTE 0 RK1	11	T1	E9-18	
E11-24		T	A2	18	BYTE 1 RK1				
B12-7	E11-23		A3	19	BYTE 2 RK1				
A12-7	E11-22		A4	20	BYTE 3 RK1				
E11-5	B11-5		A5	13	BYTE 4 RK012				
E11-4	A11-5		A6	14	BYTE 5 RK013				
B11-4	E11-2		A7	16	BYTE 7 RK123				
			A8	15					
TIE-HI			PI	12	+HI				

12160 LOC: E11 NAME: RKN1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F12-7	E11-17		A1	1	BYTE 0 RK1	7	T1	E9-20	
E12-7	E11-18		A2	24	BYTE 1 RK1				
E11-19		T	A3	23	BYTE 2 RK1				
E11-20		T	A4	22	BYTE 3 RK1				
F11-16	E11-13		A5	5	BYTE 4 RK012				
F11-17	E11-14		A6	4	BYTE 5 RK013				
E11-16		T	A7	2	BYTE 7 RK123				
B11-3	F11-3		A8	3	+HI				
F11-6	C10-24		PI	6	-L0				

12160 LOC: E12 NAME: BIR0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E13-15	F02-19		A1	17	BIT 9	11	T1	F11-24	
E14-14	E12-1		A2	18	BIT 11				
E13-24	D02-19		A3	19	BIT 13				
E12-22	D02-1		A4	20	BIT 15				
			A5						
			A6						
			A7						
			A8						
TIE-HI	E13-12		PI	12	+HI				

12160 LOC: E12 NAME: BIR1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E13-17	F02-17		A1	2	BIT 10	7	T1	E11-24	
E12-18	F02-18		A2	1	BIT 11				
E13-23	D02-2		A3	23	BIT 14				
E13-20	E12-20		A4	22	BIT 15				
			A5						
			A6						
			A7						
			A8						
TIE-HI	E13-6		PI	6	+HI				

12160 LOC: E13 NAME: BIR2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E13-18	D02-20		A1	1	BIT 12	7	T1	B11-23	
E14-18	E12-19		A2	24	BIT 13				
E14-19	E12-23		A3	23	BIT 14				
E14-20	E13-20		A4	22	BIT 15				
			A5						
			A6						
			A7						
			A8						
E12-6	E14-6		PI	6	+HI				

12160 LOC: E13 NAME: BIR3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E14-16	E12-17		A1	15	BIT 9	11	T1	A11-24	
E14-15	E12-2		A2	17	BIT 10				
E14-13	E13-1		A3	18	BIT 12				
E13-22	E12-22		A4	20	BIT 15				
			A5						
			A6						
			A7						
			A8						
E12-12			PI	12	+HI				

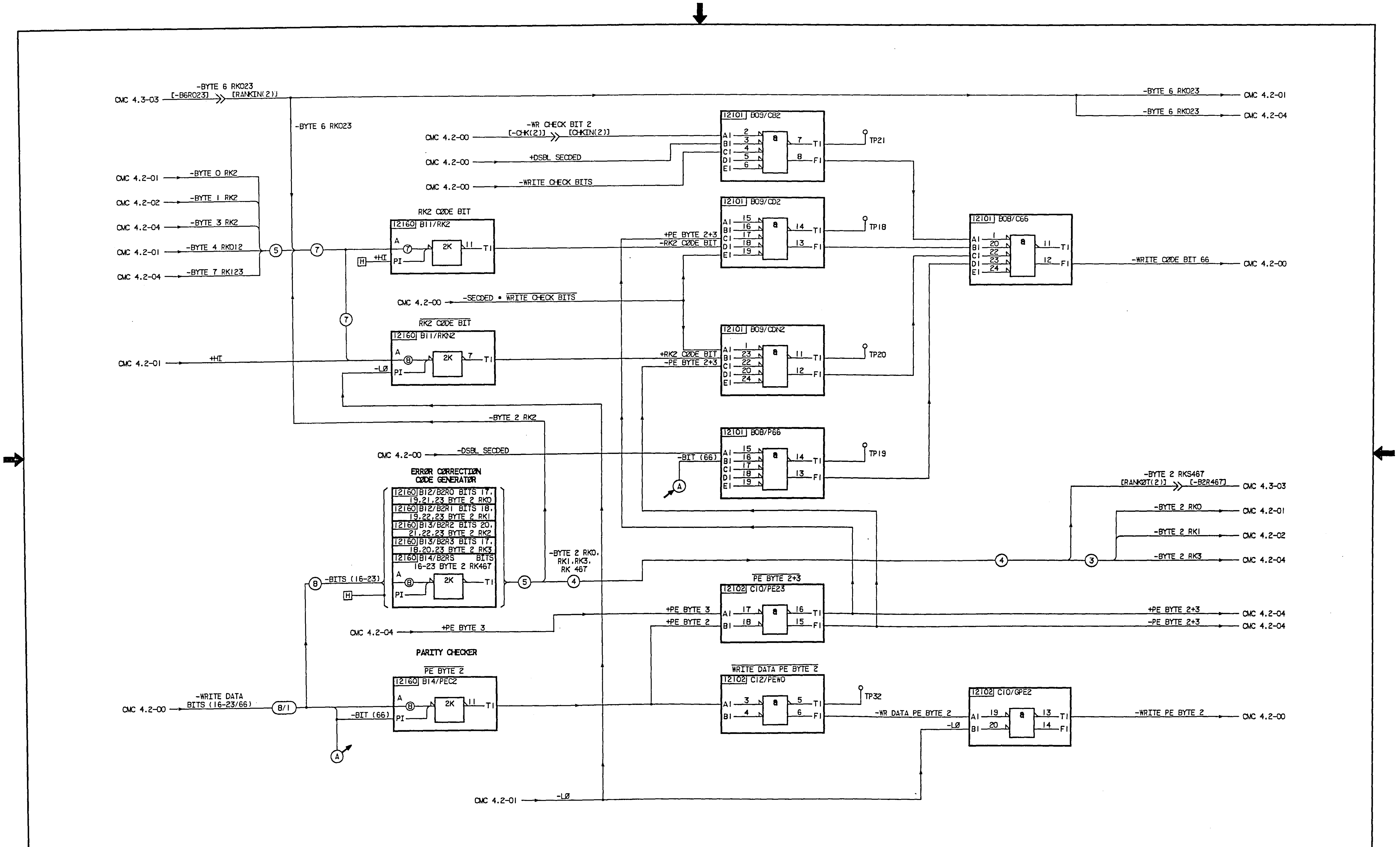
12160 LOC: E14 NAME: BIRS

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P2B-26	E14-17		A1	1	BIT 8	7	T1	P2B-39	
P2B-24	E14-16		A2	2	BIT 9				
P2B-23	E14-15		A3	3	BIT 10				
P2B-22	E14-14		A4	4	BIT 11				
P2B-21	E14-13		A5	5	BIT 12				
P2B-20	E14-18		A6	24	BIT 13				
P2B-19	E14-19		A7	23	BIT 14				
P2B-18	E14-20		A8	22	BIT 15				
E13-6			PI	6	+HI				

12160 LOC: E14 NAME: PEC1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E14-1	F2-20		A1	17	BIT 8	11	T1	D10-17	
E14-2	E13-15		A2	16	BIT 9				
E14-3	E13-17		A3	15	BIT 10				
E14-4	E12-18		A4	14	BIT 11				
E14-5	E13-18		A5	13	BIT 12				
E14-24	E13-24		A6	18	BIT 13				
E14-23	E13-23		A7	19	BIT 14				
E14-22	E13-22		A8	20	BIT 15	BIT 65 IS			
P2B-17	E08-16		PI	12	BIT 65	BYTE 1 PARITY			

ARDEN HILLS OPERATIONS	LEVEL 4 BACKUP CHART SUPPLEMENTAL WIRING INFORMATION CMC 4.2-02 7BYH; AIS/3Y00 AD112-C	CODE IDENT 34010	D	DWG NO 60458190	REV J	
				SHEET CMC 4.2-02A	17-40	



NOTES:

1. BACKUP CHART ON SHEET CMC 4.2-03A.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION
LEVEL 4 DIAGRAM-CMC 3.7
WRITE ERROR CORRECTION CODE
GENERATOR BYTE 2
7BYH;AIS/3Y00
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.2-03	17-41

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12160 LOC: B11 NAME: RK2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B11-22		T	A1	20	BYTE 0 RK2	11	T1	B09-18	
B11-23		T	A2	19	BYTE 1 RK2				
B11-24		T	A3	18	BYTE 2 RK2				
A13-7	B11-2		A4	16	BYTE 3 RK2				
B11-5		T	A5	13	BYTE 4 RK012				
A11-2	B11-1		A6	17	BYTE 6 RK023				
A11-4	B11-4		A7	14	BYTE 7 RK123				
			A8	15					
TIE-HI			PI	12	+HI				

12160 LOC: B11 NAME: RKN2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-7	B11-20		A1	22	BYTE 0 RK2	7	T1	B09-23	
E13-7	B11-19		A2	23	BYTE 1 RK2				
B13-7	B11-18		A3	24	BYTE 2 RK2				
B11-16		T	A4	2	BYTE 3 RK2				
E11-13	B11-13		A5	5	BYTE 4 RK012				
B11-17	F11-23		A6	1	BYTE 6 RK023				
B11-14	E11-16		A7	4	BYTE 7 RK123				
A11-3	E11-3		A8	3	+HI				
C10-20	A11-6		PI	6	-L0				

12160 LOC: B12 NAME: B2R0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B13-15	D02-18		A1	17	BIT 17	11	T1	F11-13	
B14-14	B12-1		A2	18	BIT 19				
B13-24	B02-17		A3	19	BIT 21				
B12-22	B02-18		A4	20	BIT 23				
			A5						
			A6						
			A7						
			A8						
TIE-HI	B12-6		PI	12	+HI				

12160 LOC: B12 NAME: B2R1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B13-17	B02-20		A1	2	BIT 18	7	T1	E11-19	
B12-18	B02-1		A2	1	BIT 19				
B13-23	B02-19		A3	23	BIT 22				
B13-20	B12-20		A4	22	BIT 23				
			A5						
			A6						
			A7						
			A8						
B12-12	B13-6		PI	6	+HI				

12160 LOC: B13 NAME: B2R2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B13-18	B02-2		A1	1	BIT 20	7	T1	B11-24	
B14-24	B12-19		A2	24	BIT 21				
B14-23	B12-23		A3	23	BIT 22				
B14-22	B13-20		A4	22	BIT 23				
			A5						
			A6						
			A7						
			A8						
B12-6	B14-6		PI	6	+HI				

12160 LOC: B13 NAME: B2R3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B14-16	B12-17		A1	15	BIT 17	11	T1	A11-23	
B14-15	B12-2		A2	17	BIT 18				
B14-13	B13-1		A3	18	BIT 20				
B13-22	B12-22		A4	20	BIT 23				
			A5						
			A6						
			A7						
			A8						
TIE-HI			PI	12	+HI				

12160 LOC: B14 NAME: B2RS

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P1B-20	B14-17		A1	1	BIT 16	7	T1	P1B-23	
P1B-19	B14-16		A2	2	BIT 17				
P1B-18	B14-15		A3	3	BIT 18				
P1B-17	B14-14		A4	4	BIT 19				
P1B-15	B14-13		A5	5	BIT 20				
B14-18	B13-24		A6	24	BIT 21				
B14-19	B13-23		A7	23	BIT 22				
B14-20	B13-22		A8	22	BIT 23				
B13-6			PI	6	+HI				

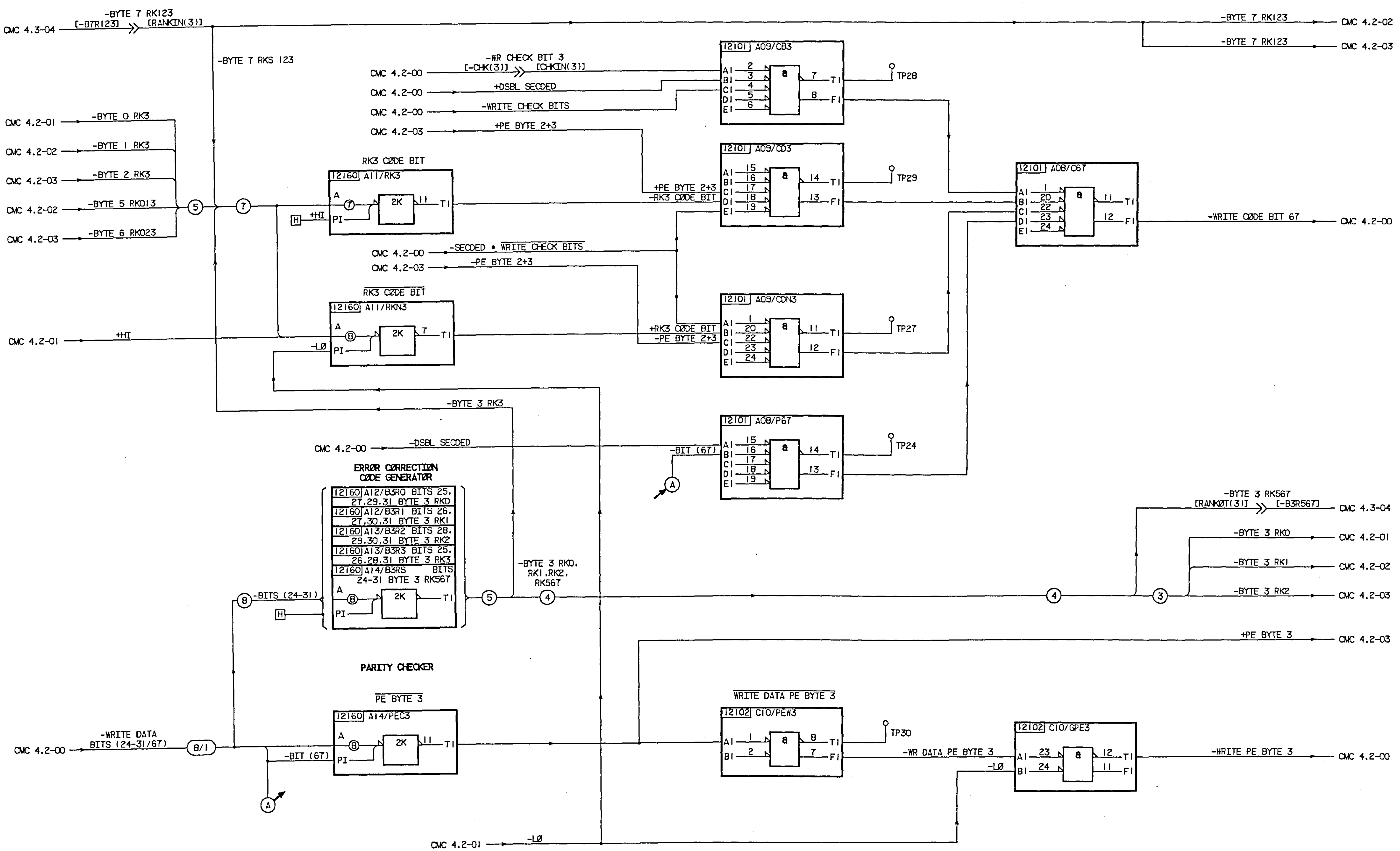
12160 LOC: B14 NAME: PEC2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B14-1	D02-17		A1	17	BIT 16	11	T1	C10-18	
B14-2	B13-15		A2	16	BIT 17				
B14-3	B13-17		A3	15	BIT 18				
B14-4	B12-18		A4	14	BIT 19				
B14-5	B13-18		A5	13	BIT 20				
P1B-14	B14-24		A6	18	BIT 21				
P1B-13	B14-23		A7	19	BIT 22				
P1B-12	B14-22		A8	20	BIT 23	BIT 66 IS			
P1B-11	B08-16		PI	12	BIT 66	BYTE 2 PARITY			

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.2-03
7BYH; A1S/3Y00 AD112-C

CODE IDENT		DWG NO	REV
34010	D	60458190	J
		SHEET CMC 4.2-03A	17-42



NOTE:

1. BACKUP CHART ON SHEET CMC 4.2-04A.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.7 WRITE ERROR CORRECTION CODE GENERATOR BYTE 3 TBYH:A1S/3Y00	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION	AD112-C	SHEET CMC 4.2-04	PAGE 17-43	

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12160 LOC: A11 NAME: RK3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A11-1		T	A1	17	BYTE 0 RK3	11	T1	A09-18	
A11-24		T	A2	18	BYTE 1 RK3				
A11-23		T	A3	19	BYTE 2 RK3				
A11-20		T	A4	20	BYTE 3 RK3				
A11-5		T	A5	13	BYTE 5 RK013				
P1B-24	A11-2		A6	16	BYTE 6 RK023				
P1B-22	A11-4		A7	14	BYTE 7 RK123				
			A8	15					
TIE-HI			PI	12	+HI				

12160 LOC: A13 NAME: B3R3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A14-16	A12-17		A1	15	BIT 25	11	T1	A11-20	
A14-15	A12-2		A2	17	BIT 26				
A14-13	A13-1		A3	18	BIT 28				
A13-22	A12-22		A4	20	BIT 31				
			A5						
			A6						
			A7						
			A8						
TIE-HI	A12-12		PI	12	+HI				

12160 LOC: A11 NAME: RKN3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-11	A11-17		A1	1	BYTE 0 RK3	7	T1	A09-20	
E13-11	A11-18		A2	24	BYTE 1 RK3				
B13-11	A11-19		A3	23	BYTE 2 RK3				
A13-11	A11-22		A4	22	BYTE 3 RK3				
E11-14	A11-13		A5	5	BYTE 5 RK013				
A11-16	B11-17		A6	2	BYTE 6 RK023				
A11-14	B11-14		A7	4	BYTE 7 RK123				
P1B-38	B11-3		A8	3	+HI				
B11-6		T	PI	6	-L0				

12160 LOC: A14 NAME: B3R5

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P1B-10	A14-17		A1	1	BIT 24	7	T1	P1B-21	
P1B-9	A14-16		A2	2	BIT 25				
P1B-8	A14-15		A3	3	BIT 26				
P1B-7	A14-14		A4	4	BIT 27				
P1B-6	A14-13		A5	5	BIT 28				
A14-18	A13-24		A6	24	BIT 29				
A14-19	A13-23		A7	23	BIT 30				
P1B-2	A14-20		A8	22	BIT 31				
A13-6			PI	6	+HI				

12160 LOC: A12 NAME: B3R0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A13-15	A02-18		A1	17	BIT 25	11	T1	F11-14	
A14-14	A12-1		A2	18	BIT 27				
A13-24	A02-20		A3	19	BIT 29				
A12-22	C02-18		A4	20	BIT 31				
			A5						
			A6						
			A7						
			A8						
A13-12	A12-6		PI	12	+HI				

12160 LOC: A14 NAME: PEC3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A14-1	A02-17		A1	17	BIT 24	11	T1	C10-17	
A14-2	A13-15		A2	16	BIT 25				
A14-3	A13-17		A3	15	BIT 26				
A14-4	A12-18		A4	14	BIT 27				
A14-5	A13-18		A5	13	BIT 28				
P1B-4	A14-24		A6	18	BIT 29				
P1B-3	A14-23		A7	19	BIT 30				
A14-22	A13-22		A8	20	BIT 31	BIT 67 IS			
P1B-1	A08-16		PI	12	BIT 67	BYTE 3 PARITY			

12160 LOC: A12 NAME: B3R1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A13-17	A02-19		A1	2	BIT 26	7	T1	E11-20	
A12-18	A02-2		A2	1	BIT 27				
A13-23	C02-17		A3	23	BIT 30				
A13-20	A12-20		A4	22	BIT 31				
			A5						
			A6						
			A7						
			A8						
A12-12	A13-6		PI	6	+HI				

12160 LOC: A13 NAME: B3R2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A13-18	A02-1		A1	1	BIT 28	7	T1	B11-16	
A14-24	A12-19		A2	24	BIT 29				
A14-23	A12-23		A3	23	BIT 30				
A14-20	A13-20		A4	22	BIT 31				
			A5						
			A6						
			A7						
			A8						
A12-6	A14-6		PI	6	+HI				

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.2-04
78YH; A1S/3Y00 AD112-C

CODE IDENT		DWG NO	REV
34010	D	60458190	J
		SHEET CMC 4.2-04A	17-44

LEFT ZIF ⚠1

BIT NAME		I/Ø	SHEET CMC 4.2-	TYPE	VIRTUAL PIN	REAL PIN
TDATA (0)	TWD (0)	Ø	00	D	Y80	P2A-28
FDATA (0)	FWD (0)				A8	29
(1)	(1)				81	30
(1)	(1)				A9	31
(2)	(2)				82	34
(2)	(2)				AA	35
(3)	(3)				83	37
(3)	(3)				AB	38
(4)	(4)				84	39
(4)	(4)				AC	40
(5)	(5)				85	32
(5)	(5)				AD	33
(6)	(6)				86	21
(6)	(6)				AE	22
(7)	(7)				87	27
(7)	(7)				AF	26
(8)	(8)				88	23
(8)	(8)				B0	24
(9)	(9)				89	19
(9)	(9)				B1	20
(10)	(10)				8A	14
(10)	(10)				B2	15
(11)	(11)				8B	17
(11)	(11)				B3	18
(12)	(12)				8C	08
(12)	(12)				B4	09
(13)	(13)				8D	06
(13)	(13)				B5	07
(14)	(14)				8E	13
(14)	(14)				B6	12
(15)	(15)				8F	10
(15)	(15)				B7	11
(16)	(16)				90	01
(16)	(16)				B8	02
(17)	(17)				91	04
(17)	(17)				B9	P2A-03
(18)	(18)				92	P1A-21
(18)	(18)				BA	22
(19)	(19)				93	23
(19)	(19)				BB	24
(20)	(20)				94	27
(20)	(20)				BC	26
(21)	(21)				95	14
(21)	(21)				BD	15
(22)	(22)				96	19
(22)	(22)				BE	20
(23)	(23)				97	18
(23)	(23)				BF	17
(24)	(24)				98	01
(24)	(24)				C0	02
(25)	(25)				99	03
(25)	(25)				C1	04
(26)	(26)				9A	06
(26)	(26)				C2	07
(27)	(27)				9B	13
(27)	(27)				C3	12
(28)	(28)				9C	10
(28)	(28)				C4	11
(29)	(29)				9D	09
(29)	(29)				C5	08
(30)	(30)				9E	28
(30)	(30)				C6	29
TDATA (31)	TWD (31)				9F	31
FDATA (31)	FWD (31)				C7	30
TDECC (0)	TDECC (64)				A0	37
FDECC (0)	FDECC (64)				C8	38
(1)	(65)				A1	40
(1)	(65)				C9	39
(2)	(66)				A2	32
(2)	(66)				CA	33
TDECC (3)	TDECC (67)				A3	35
FDECC (3)	FDECC (67)	Ø	00	D	YCB	P1A-34

ZIF GRØUND PINS

P1A-05	P1A-25	P2A-05	P2A-25
P1A-16	P1A-36	P2A-16	P2A-36

CØAX ⚠1

BIT NAME		I/Ø	SHEET CMC 4.2-	TYPE	VIRTUAL PIN	REAL PIN
MCK	NCLKN (412)	I	00	C	Y24	P1C-80
PHM	CLKPM (75)	I			25	92
PARERR (0)	WDPERR (0)	Ø			D0	98
(1)	(1)				D1	97
(2)	(2)				D2	106
PARERR (3)	WDPERR (3)			C	D3	105
PWPEØ	NU				E1	83
PWPE	NU	Ø			E2	79
PWPEI	NU	I	00		Y32	P1C-110

RIGHT ZIF ⚠1

BIT NAME		I/Ø	SHEET CMC 4.2-	TYPE	VIRTUAL PIN	REAL PIN
DATAIN (0)	DATA (0)	I	00	Z	Y00	P2B-35
(1)	(1)				01	34
(2)	(2)				02	33
(3)	(3)				03	32
(4)	(4)				04	31
(5)	(5)				05	30
(6)	(6)				06	29
(7)	(7)				07	28
(8)	(8)				08	26
(9)	(9)				09	24
(10)	(10)				0A	23
(11)	(11)				0B	22
(12)	(12)				0C	21
(13)	(13)				0D	20
(14)	(14)				0E	19
(15)	(15)				0F	P2B-18
(16)	(16)				10	P1B-20
(17)	(17)				11	19
(18)	(18)				12	18
(19)	(19)				13	17
(20)	(20)				14	15
(21)	(21)				15	14
(22)	(22)				16	13
(23)	(23)				17	12
(24)	(24)				18	10
(25)	(25)				19	09
(26)	(26)				1A	08
(27)	(27)				1B	07
(28)	(28)				1C	06
(29)	(29)				1D	04
(30)	(30)				1E	03
DATAIN (31)	DATA (31)				1F	P1B-02
PARIN (0)	PAR (64)				20	P2B-27
(1)	(65)				21	P2B-17
(2)	(66)				22	P1B-11
PARIN (3)	PAR (67)				23	P1B-01
RANKIN (0)	B4R012		01		29	P2B-38
(1)	B5R013		02		2A	P2B-40
(2)	B6R023		03		2B	P1B-24
RANKIN (3)	B7R123		04		2C	P1B-22
CHKIN (0)	CHK (0)		01		2D	P2B-07
(1)	(1)		02		2E	09
(2)	(2)		03		2F	11
CHKIN (3)	CHK (3)		04		30	P2B-13
DSD	EC20FØ (6)		00		27	P1B-35
RKBIAS	RKBIAS (0)		01		31	38
WCB	WCB (0)		00	Z	26	40
DPC	NU	I	01		28	P1B-37
RANKØT (0)	B0R456	Ø	01	Z	D4	P2B-37
(1)	B1R457		02		D5	P2B-39
(2)	B2R467		03		D6	P1B-23
RANKØT (3)	B3R567		04		D7	P1B-21
CHKØUT (0)	CHK (0)		00		D8	P2B-03
(1)	(1)				D9	01
(2)	(2)				DA	06
(3)	(3)				DB	15
(4)	(4)				DC	08
(5)	(5)				DD	10
(6)	(6)				DE	14
CHKØUT (7)	CHK (7)				DF	P2B-12
HIS	RKBIAS (0)			Z	E0	P1B-39
TDPAR (0)	TDPAR (64)			D	A4	28
FDPAR (0)	FDPAR (64)				CC	27
(1)	(65)				A5	30
(1)	(65)				CD	29
(2)	(66)				A6	32
(2)	(66)				CE	31
TDPAR (3)	TDPAR (67)				A7	34
FDPAR (3)	FDPAR (67)	Ø	00	D	YCF	P1B-33

ZIF GRØUND PINS

P1B-05	P1B-25	P2B-05	P2B-25
P1B-16	P1B-36	P2B-16	P2B-36

NØTES:

⚠1 CØNNECTØR TYPES:

C = CØAX
D = DIFFERENTIAL
Z = ZIF TØ FØIL ØN INTERCØNNECT BØARD

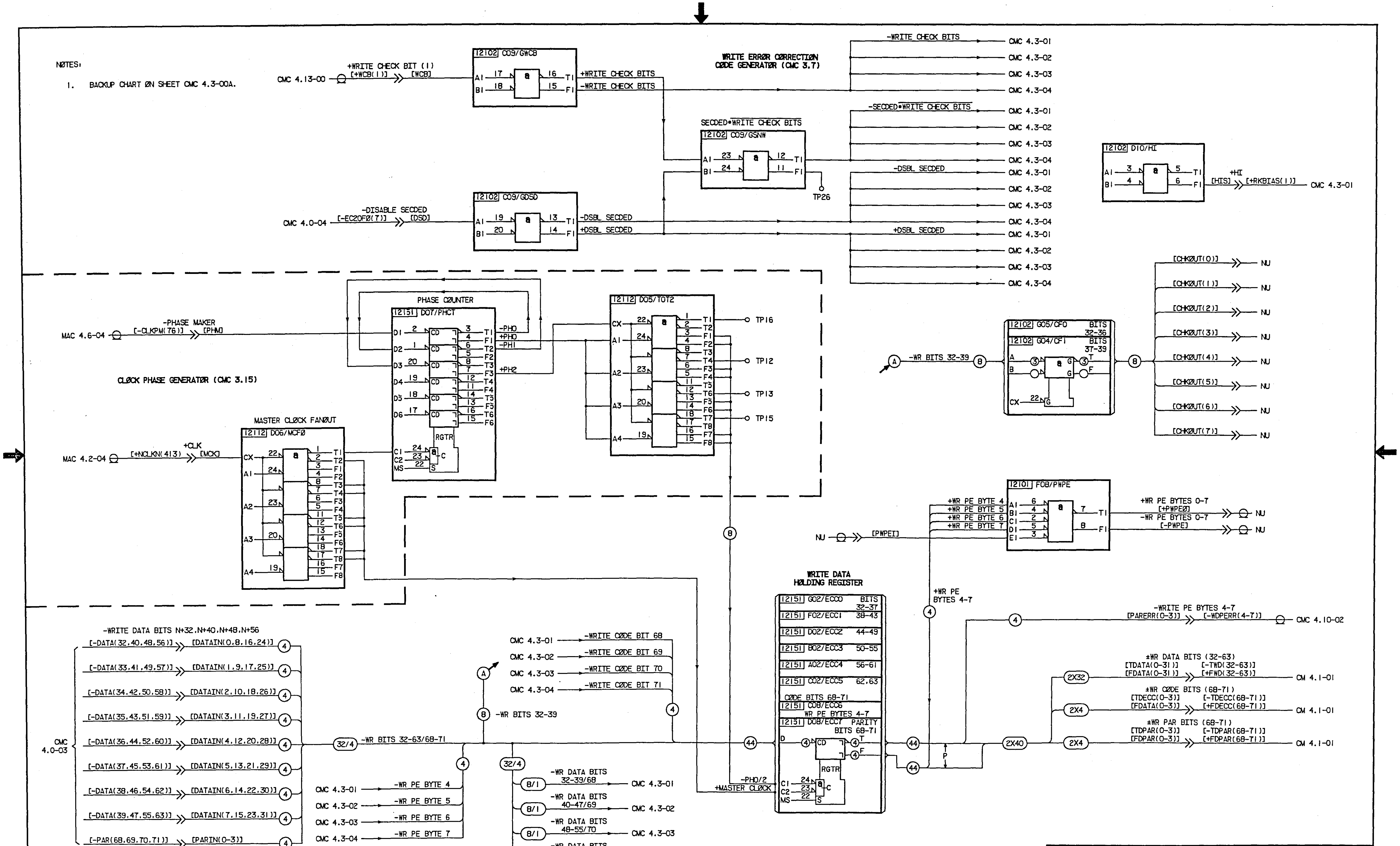
CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 CØNNECTØR CHART
SUPPLEMENTAL WIRING INFØRMATIØN
TBYH:A1S/3Y00
AD112-C

CODE IDENT | DWG NO 60458190 | REV J
SHEET CMC 4.2-CC | PAGE 17-45

NOTES:

1. BACKUP CHART ON SHEET CMC 4.3-00A.



CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.7.3.15 WRITE ERROR CORRECTION CODE GENERATOR, CLOCK PHASE GENERATOR, WRITE DATA BITS 32-63,68-71 7BYH,A1T/3Y01 AD112-C	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION		SHEET CMC 4.3-00	PAGE 17-46	

REVISION RECORD

REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12151 LOC: G02 NAME: ECC0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G05-17		T	D1	17	DATA	16	T1	P2A-28	
					BIT 32	15	F1	P2A-29	
G05-19		T	D2	18	BIT 33	14	T2	P2A-30	
						13	F2	P2A-31	
G05-23		T	D3	20	BIT 34	8	T3	P2A-34	
						7	F3	P2A-35	
G05-1		T	D4	1	BIT 35	6	T4	P2A-37	
						5	F4	P2A-38	
G05-3		T	D5	2	BIT 36	3	T5	P2A-39	
						4	F5	P2A-40	
G04-17		T	D6	19	BIT 37	12	T6	P2A-32	
						11	F6	P2A-33	
D05-3		T	C1	24	NØTE: C1 FRØM TOT2,PIN F1				
D06-7		T	C2	23	C2 FRØM MCFØ,PIN T4				
			MS	22					

12151 LOC: F02 NAME: ECC1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G04-23		T	D1	1	DATA	6	T1	P2A-21	
					BIT 38	5	F1	P2A-22	
G04-19		T	D2	2	BIT 39	3	T2	P2A-27	
						4	F2	P2A-26	
E14-17		T	D3	20	BIT 40	8	T3	P2A-23	
						7	F3	P2A-24	
E12-17		T	D4	19	BIT 41	12	T4	P2A-19	
						11	F4	P2A-20	
E12-2		T	D5	17	BIT 42	16	T5	P2A-14	
						15	F5	P2A-15	
E12-1		T	D6	18	BIT 43	14	T6	P2A-17	
						13	F6	P2A-18	
D05-4		T	C1	24	NØTE: C1 FRØM TOT2,PIN F2				
D06-8		T	C2	23	C2 FRØM MCFØ,PIN T3				
			MS	22					

12151 LOC: D02 NAME: ECC2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E13-1		T	D1	20	DATA	8	T1	P2A-8	
					BIT 44	7	F1	P2A-9	
E12-19		T	D2	19	BIT 45	12	T2	P2A-6	
						11	F2	P2A-7	
E12-23		T	D3	2	BIT 46	3	T3	P2A-13	
						4	F3	P2A-12	
E12-20		T	D4	1	BIT 47	6	T4	P2A-10	
						5	F4	P2A-11	
B14-17		T	D5	17	BIT 48	16	T5	P2A-1	
						15	F5	P2A-2	
B12-17		T	D6	18	BIT 49	14	T6	P2A-4	
						13	F6	P2A-3	
D05-15		T	C1	24	NØTE: C1 FRØM TOT2,PIN F8				
D06-12		T	C2	23	C2 FRØM MCFØ,PIN T6				
			MS	22					

12151 LOC: B02 NAME: ECC3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B12-2		T	D1	20	DATA	8	T1	P1A-21	
					BIT 50	7	F1	P1A-22	
B12-1		T	D2	1	BIT 51	6	T2	P1A-23	
						5	F2	P1A-24	
B13-1		T	D3	2	BIT 52	3	T3	P1A-27	
						4	F3	P1A-26	
B12-19		T	D4	17	BIT 53	16	T4	P1A-14	
						15	F4	P1A-15	
B12-23		T	D5	19	BIT 54	12	T5	P1A-19	
						11	F5	P1A-20	
B12-20		T	D6	18	BIT 55	14	T6	P1A-18	
						13	F6	P1A-17	
D05-14		T	C1	24	NØTE: C1 FRØM TOT2,PIN F6				
D06-17		T	C2	23	C2 FRØM MCFØ,PIN T8				
			MS	22					

12151 LOC: A02 NAME: ECC4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A14-17		T	D1	17	DATA	16	T1	P1A-1	
					BIT 56	15	F1	P1A-2	
A12-17		T	D2	18	BIT 57	14	T2	P1A-3	
						13	F2	P1A-4	
A12-2		T	D3	19	BIT 58	12	T3	P1A-6	
						11	F3	P1A-7	
A12-1		T	D4	2	BIT 59	3	T4	P1A-13	
						4	F4	P1A-12	
A13-1		T	D5	1	BIT 60	6	T5	P1A-10	
						5	F5	P1A-11	
A12-19		T	D6	20	BIT 61	8	T6	P1A-9	
						7	F6	P1A-8	
D05-13		T	C1	24	NØTE: C1 FRØM TOT2,PIN F5				
D06-18		T	C2	23	C2 FRØM MCFØ,PIN T7				
			MS	22					

12151 LOC: C02 NAME: ECC5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A12-23		T	D1	17	DATA	16	T1	P1A-28	
					BIT 62	15	F1	P1A-29	
A12-20		T	D2	18	BIT 63	14	T2	P1A-31	
						13	F2	P1A-30	
F08-12		T	D3	1	CØDE	6	T3	P1A-37	
					BIT 68	5	F3	P1A-38	
E08-12		T	D4	2	CØDE	3	T4	P1A-40	
					BIT 69	4	F4	P1A-39	
B08-12		T	D5	19	CØDE	12	T5	P1A-32	
					BIT 70	11	F5	P1A-33	
A08-12		T	D6	20	CØDE	8	T6	P1A-35	
					BIT 71	7	F6	P1A-34	
D05-5		T	C1	24	NØTE: C1 FRØM TOT2,PIN F4				
D06-11		T	C2	23	C2 FRØM MCFØ,PIN T5				
			MS	22					

12151 LOC: C08 NAME: ECC6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D10-12		T	D1	20	WR PE	8	T1	P1C-98	
					BYTE 4	7	F1	F08-06	
D10-13		T	D2	19	WR PE	12	T2	P1C-97	
					BYTE 5	11	F2	F08-04	
C10-13		T	D3	17	WR PE	16	T3	P1C-106	
					BYTE 6	15	F3	F08-02	
C10-12		T	D4	18	WR PE	14	T4	P1C-105	
					BYTE 7	13	F4	F08-05	
			D5	1		6	T5		
						5	F5		
			D6	2		3	T6		
						4	F6		
D05-16		T	C1	24	NØTE: C1 FRØM TOT2,PIN F7				
D06-2	D08-23		C2	23	C2 FRØM MCFØ,PIN T2				
			MS	22					

12151 LOC: D08 NAME: ECC7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F08-16		T	D1	1	PARITY	6	T1	P1B-28	
					BIT 68	5	F1	P1B-27	
E08-16		T	D2	2	PARITY	3	T2	P1B-30	
					BIT 69	4	F2	P1B-29	
B08-16		T	D3	18	PARITY	14	T3	P1B-32	
					BIT 70	13	F3	P1B-31	
A08-16		T	D4	17	PARITY	16	T4	P1B-34	
					BIT 71	15	F4	P1B-33	
			D5	19		12	T5		
						11	F5		
			D6	20		8	T6		
						7	F6		
D05-6		T	C1	24	NØTE: C1 FRØM TOT2,PIN F3				
C08-23		T	C2	23	C2 FRØM MCFØ,PIN T2				
			MS	22					

12102 LOC: G05 NAME: CF0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F14-17	G02-17		A1	17	WR CHECK	16	T1	P2B-3	
			B1	18	BIT 32	15	F1	TERM	
F12-17	G02-18		A2	19	WR CHECK	13	T2	P2B-1	
			B2	20	BIT 33	14	F2	TERM	
F12-2	G02-20		A3	23	WR CHECK	12	T3	P2B-6	
			B3	24	BIT 34	11	F3	TERM	
F12-1	G02-1		A4	1	WR CHECK	8	T4	P2B-15	
			B4	2	BIT 35	7	F4	TERM	
F13-1	G02-2		A5	3	WR CHECK	5	T5	P2B-8	
			B5	4	BIT 36	6	F5	TERM	
			CX	22					

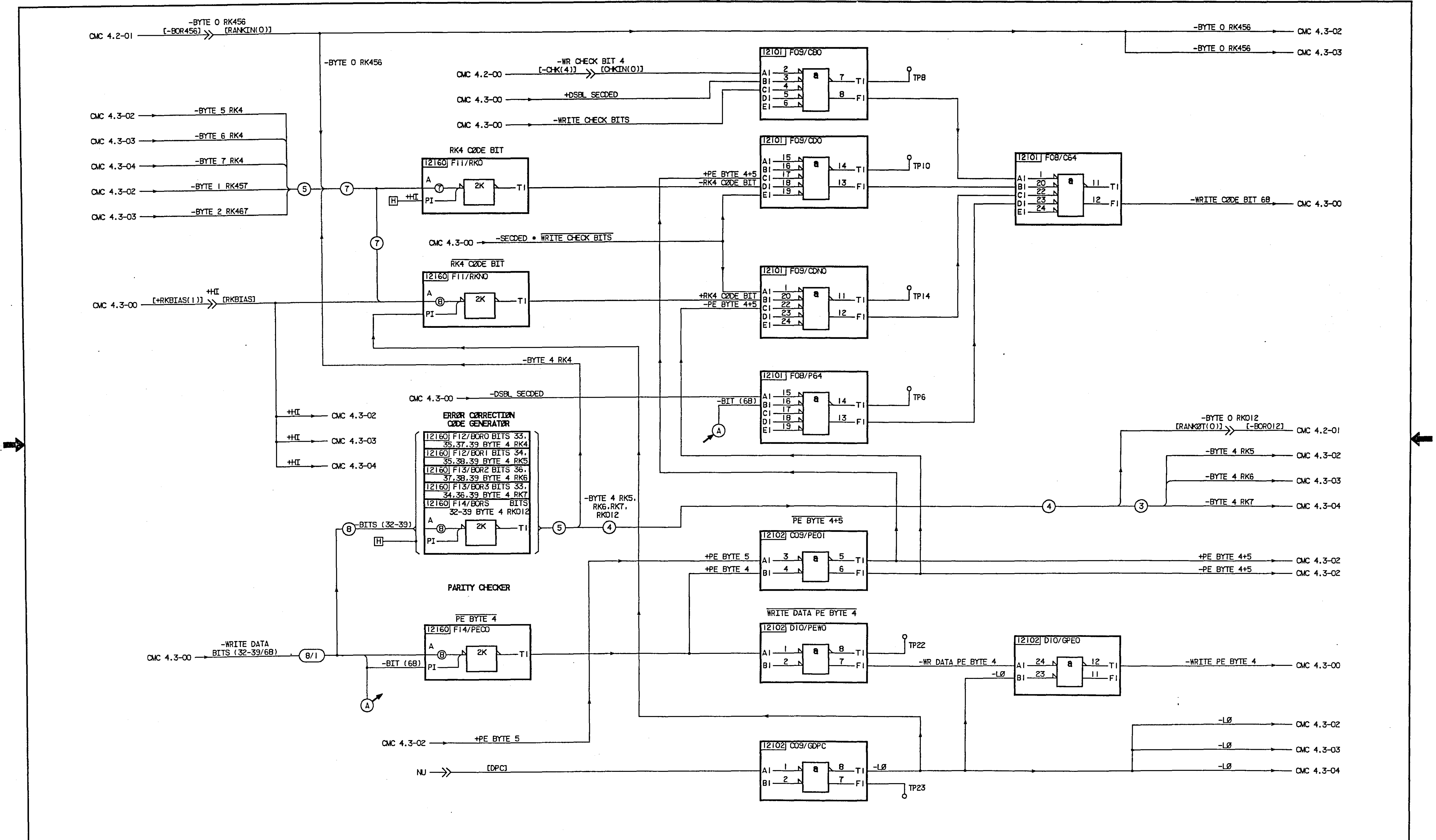
12102 LOC: G04 NAME: CF1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F12-19	G02-19		A1	17	WR CHECK	16	T1	P2B-10	
			B1	18	BIT 37	15	F1	TERM	
F12-23	F02-1		A2	23	WR CHECK	12	T2	P2B-14	
			B2	24	BIT 38	11	F2	TERM.	
F12-20	F02-2		A3	19	WR CHECK	13	T3	P2B-12	
			B3	20	BIT 39	14	F3	TERM	
			A4	1		8	T4		
			B4	2		7	F4		
			A5	3		5	T5		
			B5	4		6	F5		
			CX	22					

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.3-00
7BYH: A1T/3Y01 AD112-C

CODE IDENT		DWG NO	REV
34010	D	60458190	J
		SHEET CMC 4.3-00A	17-47



NOTES:

1. BACKUP CHART ON SHEET CMC 4.3-01A.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.7
WRITE ERROR CORRECTION CODE
GENERATOR BYTE 4
7BYH;A1T/3Y01
AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.3-01
PAGE 17-48

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12160 LOC: F11 NAME: RKO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F12-11	F11-22		A1	20	BYTE 4 RK 4	11	T1	F9-18	
F11-24		T	A2	18	BYTE 5 RK 4				
B12-11	F11-5		A3	13	BYTE 6 RK 4				
A12-11	F11-4		A4	14	BYTE 7 RK 4				
F11-2	E11-5		A5	16	BYTE 0 RK456				
F11-1	E11-4		A6	17	BYTE 1 RK457				
F11-23		T	A7	19	BYTE 2 RK467				
			A8	15					
TIE-HI			P1	12	+HI				

12160 LOC: F11 NAME: RKNO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F11-20		T	A1	22	BYTE 4 RK 4	7	T1	F9-20	
E12-11	F11-18		A2	24	BYTE 5 RK 4				
F11-13		T	A3	5	BYTE 6 RK 4				
F11-14		T	A4	4	BYTE 7 RK 4				
P2B-38	F11-16		A5	2	BYTE 0 RK456				
P2B-40	F11-17		A6	1	BYTE 1 RK457				
B11-1	F11-19		A7	23	BYTE 2 RK467				
E11-3		T	A8	3	+HI				
D10-20	E11-6		P1	6	-L0				

12160 LOC: F12 NAME: BORO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-15	G05-19		A1	17	BIT 33	11	T1	F11-20	
F14-14	F12-1		A2	18	BIT 35				
F13-24	G04-17		A3	19	BIT 37				
F12-22	G04-19		A4	20	BIT 39				
			A5						
			A6						
			A7						
			A8						
F13-12	F11-12		P1	12	+HI				

12160 LOC: F12 NAME: BOR1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-17	G05-23		A1	2	BIT 34	7	T1	E11-1	
F12-18	G05-1		A2	1	BIT 35				
F13-23	G04-23		A3	23	BIT 38				
F13-20	F12-20		A4	22	BIT 39				
			A5						
			A6						
			A7						
			A8						
TIE-HI			P1	6	+HI				

12160 LOC: F13 NAME: BOR2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-18	G05-3		A1	1	BIT 36	7	T1	B11-22	
F14-18	F12-19		A2	24	BIT 37				
F14-19	F12-23		A3	23	BIT 38				
F14-20	F13-20		A4	22	BIT 39				
			A5						
			A6						
			A7						
			A8						
F14-6	F12-6		P1	6	+HI				

12160 LOC: F13 NAME: BOR3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F14-16	F12-17		A1	15	BIT 33	11	T1	A11-1	
F14-15	F12-2		A2	17	BIT 34				
F14-13	F13-1		A3	18	BIT 36				
F13-22	F12-22		A4	20	BIT 39				
			A5						
			A6						
			A7						
			A8						
TIE-HI	F12-12		P1	12	+HI				

12160 LOC: F14 NAME: BORS

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P2B-35	F14-17		A1	1	BIT 32	7	T1	P2B-37	
P2B-34	F14-16		A2	2	BIT 33				
P2B-33	F14-15		A3	3	BIT 34				
P2B-32	F14-14		A4	4	BIT 35				
P2B-31	F14-13		A5	5	BIT 36				
P2B-30	F14-18		A6	24	BIT 37				
P2B-29	F14-19		A7	23	BIT 38				
P2B-28	F14-20		A8	22	BIT 39				
TIE-HI	F13-6		P1	6	+HI				

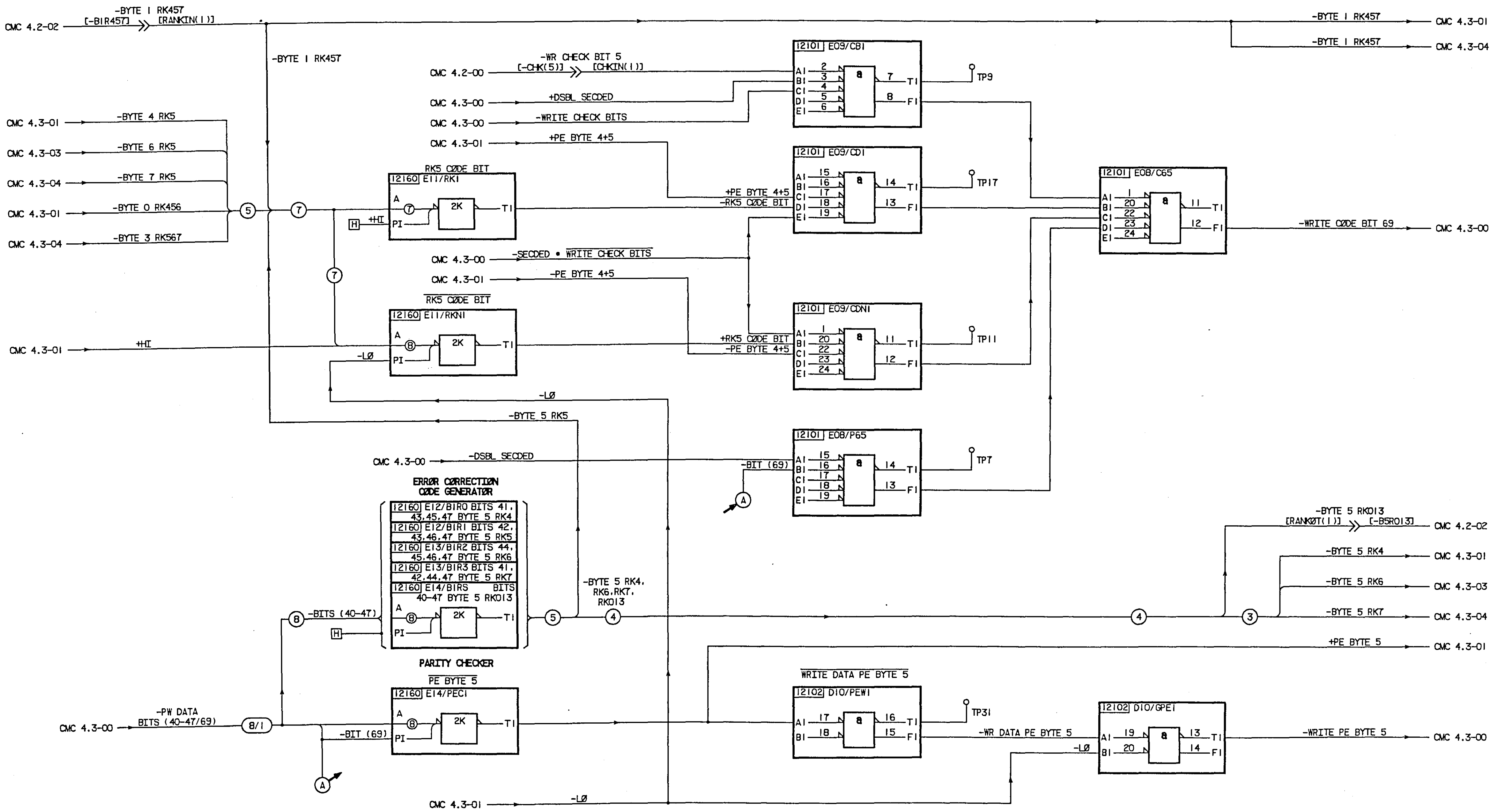
12160 LOC: F14 NAME: PECO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F14-1	G05-17		A1	17	BIT 32	11	T1	D10-1	
F14-2	F13-15		A2	16	BIT 33				
F14-3	F13-17		A3	15	BIT 34				
F14-4	F12-18		A4	14	BIT 35				
F14-5	F13-18		A5	13	BIT 36				
F14-24	F13-24		A6	18	BIT 37				
F14-23	F13-23		A7	19	BIT 38				
F14-22	F13-22		A8	20	BIT 39	BIT 68 IS			
P2B-27	F08-16		P1	12	BIT 68	BYTE 4 PARITY			

GD
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.3-01
7BYH; AIT/3Y01 AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.3-01A
17-49



NOTES:

1. BACKUP CHART ON SHEET CMC 4.3-02A.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.7
WRITE ERROR CORRECTION
CODE GENERATOR BYTE 5
7BYH;A1T/3Y01
AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.3-02
PAGE 17-50

12160 LOC: E11 NAME: RK1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E11-1		T	A1	17	BYTE 4 RK 5	11	T1	E9-18	
E11-24		T	A2	18	BYTE 5 RK 5				
B12-7	E11-23		A3	19	BYTE 6 RK 5				
A12-7	E11-22		A4	20	BYTE 7 RK 5				
E11-5	E11-5		A5	13	BYTE 0 RK 456				
E11-4	A11-5		A6	14	BYTE 1 RK 457				
B11-4	E11-2		A7	16	BYTE 3 RK 567				
			A8	15					
TIE-HI			P1	12	+HI				

12160 LOC: E11 NAME: RKN1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F12-7	E11-17		A1	1	BYTE 4 RK 5	7	T1	E9-20	
E12-7	E11-18		A2	24	BYTE 5 RK 5				
E11-19		T	A3	23	BYTE 6 RK 5				
E11-20		T	A4	22	BYTE 7 RK 5				
F11-16	E11-13		A5	5	BYTE 0 RK 456				
F11-17	E11-14		A6	4	BYTE 1 RK 457				
E11-16		T	A7	2	BYTE 3 RK 567				
B11-3	F11-3		A8	3	+HI				
F11-6	C10-24		P1	6	-L0				

12160 LOC: E12 NAME: BIR0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E13-15	F02-19		A1	17	BIT 41	11	T1	F11-24	
E14-14	E12-1		A2	18	BIT 43				
E13-24	D02-19		A3	19	BIT 45				
E12-22	D02-1		A4	20	BIT 47				
			A5						
			A6						
			A7						
			A8						
TIE-HI	E13-12		P1	12	+HI				

12160 LOC: E12 NAME: BIR1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E13-17	F02-17		A1	2	BIT 42	7	T1	E11-24	
E12-18	F02-18		A2	1	BIT 43				
E13-23	D02-2		A3	23	BIT 46				
E13-20	E12-20		A4	22	BIT 47				
			A5						
			A6						
			A7						
			A8						
TIE-HI	E13-6		P1	6	+HI				

12160 LOC: E13 NAME: BIR2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E13-18	D02-20		A1	1	BIT 44	7	T1	B11-23	
E14-18	E12-19		A2	24	BIT 45				
E14-19	E12-23		A3	23	BIT 46				
E14-20	E13-20		A4	22	BIT 47				
			A5						
			A6						
			A7						
			A8						
E12-6	E14-6		P1	6	+HI				

12160 LOC: E13 NAME: BIR3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E14-16	E12-17		A1	15	BIT 41	11	T1	A11-24	
E14-15	E12-2		A2	17	BIT 42				
E14-13	E13-1		A3	18	BIT 44				
E13-22	E12-22		A4	20	BIT 47				
			A5						
			A6						
			A7						
			A8						
E12-12			P1	12	+HI				

12160 LOC: E14 NAME: BIR5

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P2B-26	E14-17		A1	1	BIT 40	7	T1	P2B-39	
P2B-24	E14-16		A2	2	BIT 41				
P2B-23	E14-15		A3	3	BIT 42				
P2B-22	E14-14		A4	4	BIT 43				
P2B-21	E14-13		A5	5	BIT 44				
P2B-20	E14-18		A6	24	BIT 45				
P2B-19	E14-19		A7	23	BIT 46				
P2B-18	E14-20		A8	22	BIT 47				
E13-6			P1	6	+HI				

12160 LOC: E14 NAME: PEC1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E14-1	F2-20		A1	17	BIT 40	11	T1	D10-17	
E14-2	E13-15		A2	16	BIT 41				
E14-3	E13-17		A3	15	BIT 42				
E14-4	E12-18		A4	14	BIT 43				
E14-5	E13-18		A5	13	BIT 44				
E14-24	E13-24		A6	18	BIT 45				
E14-23	E13-23		A7	19	BIT 46				
E14-22	E13-22		A8	20	BIT 47	BIT 69 IS			
P2B-17	E08-16		P1	12	BIT 69	BYTE 5 PARITY			

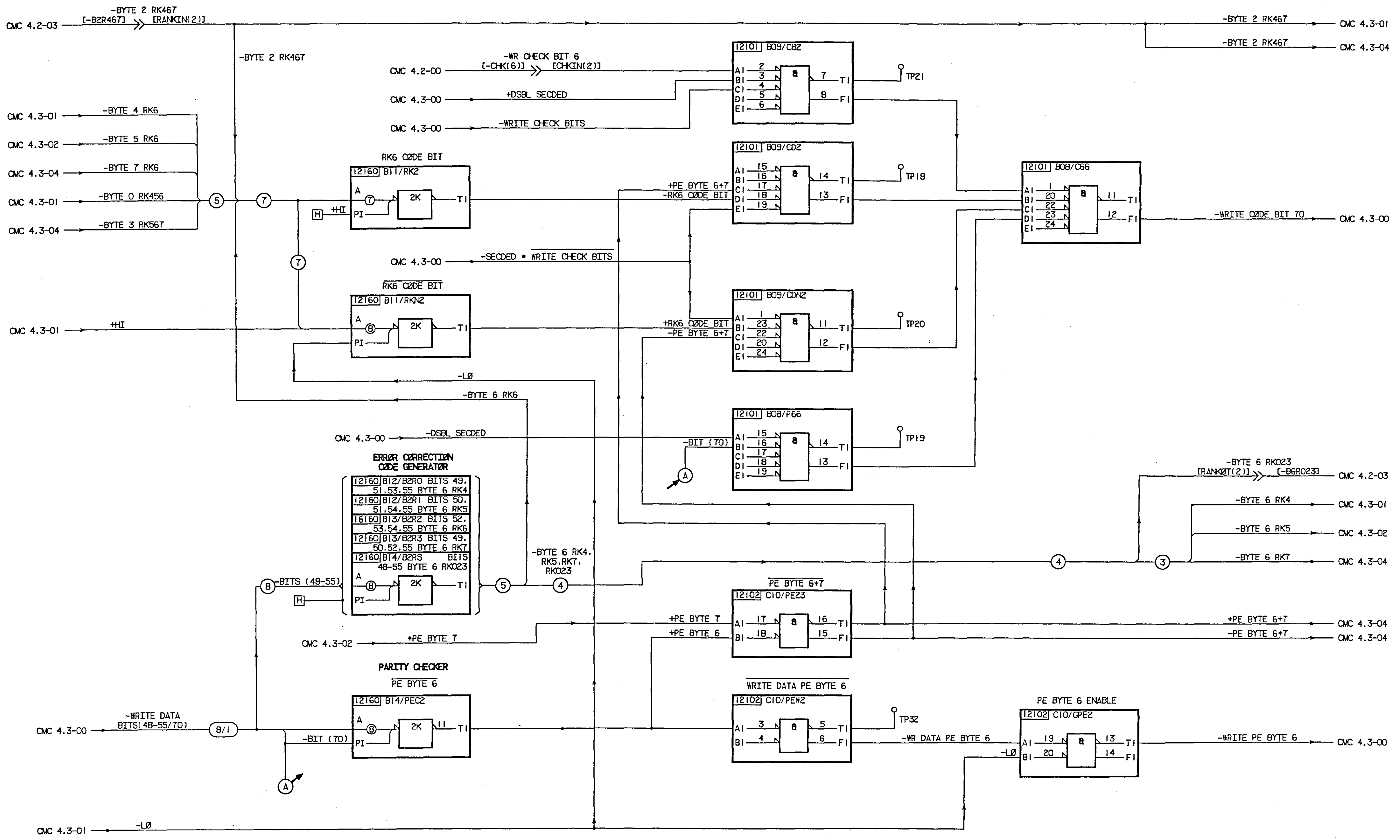
REVISION RECORD

REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.3-02
7BYH; AIT/3Y01
AD112-C

CODE IDENT		DWG NO	REV
34010	D	60458190	J
		SHEET CMC 4.3-02A	17-51



NOTES:
1. BACKUP CHART ON SHEET CMC 4.5-03A.

CONTROL DATA CORPORATION DEVELOPMENT DIVISION	LEVEL 4 DIAGRAM - CMC 3.7 PARTIAL WRITE ERROR CORRECTION CODE GENERATOR BYTE 6. TBYH:A1T/3Y01 AD112-C	CODE IDENT / DWG NO 60458190	REV J	
		SHEET CMC 4.3-03	PAGE 17-52	

REVISION RECORD

REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12160 LOC: B11 NAME: RK2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B11-22		T	A1	20	BYTE 4 RK 6	11	T1	B09-18	
B11-23		T	A2	19	BYTE 5 RK 6				
B11-24		T	A3	18	BYTE 6 RK 6				
A13-7	B11-2		A4	16	BYTE 7 RK 6				
B11-5		T	A5	13	BYTE 0 RK 456				
A11-2	B11-1		A6	17	BYTE 2 RK 467				
A11-4	B11-4		A7	14	BYTE 3 RK 567				
			A8	15					
TIE-HI			P1	12	+HI				

12160 LOC: B11 NAME: RKN2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-7	B11-20		A1	22	BYTE 4 RK 6	7	T1	B09-23	
E13-7	B11-19		A2	23	BYTE 5 RK 6				
B13-7	B11-18		A3	24	BYTE 6 RK 6				
B11-16		T	A4	2	BYTE 7 RK 6				
E11-13	B11-13		A5	5	BYTE 0 RK 456				
B11-17	F11-23		A6	1	BYTE 2 RK 467				
B11-14	E11-16		A7	4	BYTE 3 RK 567				
A11-3	E11-3		A8	3	+HI				
C10-20	A11-6		P1	6	-L0				

12160 LOC: B12 NAME: B2R0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B13-15	D02-18		A1	17	BIT 49	11	T1	F11-13	
B14-14	B12-1		A2	18	BIT 51				
B13-24	B02-17		A3	19	BIT 53				
B12-22	B02-18		A4	20	BIT 55				
			A5						
			A6						
			A7						
			A8						
TIE-HI	B12-6		P1	12	+HI				

12160 LOC: B12 NAME: B2R1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B13-17	B02-20		A1	2	BIT 50	7	T1	E11-19	
B12-18	B02-1		A2	1	BIT 51				
B13-23	B02-19		A3	23	BIT 54				
B13-20	B12-20		A4	22	BIT 55				
			A5						
			A6						
			A7						
			A8						
B12-12	B13-6		P1	6	+HI				

12160 LOC: B13 NAME: B2R2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B13-18	B02-2		A1	1	BIT 52	7	T1	B11-24	
B14-24	B12-19		A2	24	BIT 53				
B14-23	B12-23		A3	23	BIT 54				
B14-22	B13-20		A4	22	BIT 55				
			A5						
			A6						
			A7						
			A8						
B12-6	B14-6		P1	6	+HI				

12160 LOC: B13 NAME: B2R3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B14-16	B12-17		A1	15	BIT 49	11	T1	A11-23	
B14-15	B12-2		A2	17	BIT 50				
B14-13	B13-1		A3	18	BIT 52				
B13-22	B12-22		A4	20	BIT 55				
			A5						
			A6						
			A7						
			A8						
TIE-HI			P1	12	+HI				

12160 LOC: B14 NAME: B2R5

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P1B-20	B14-17		A1	1	BIT 48	7	T1	P1B-23	
P1B-19	B14-16		A2	2	BIT 49				
P1B-18	B14-15		A3	3	BIT 50				
P1B-17	B14-14		A4	4	BIT 51				
P1B-15	B14-13		A5	5	BIT 52				
B14-18	B13-24		A6	24	BIT 53				
B14-19	B13-23		A7	23	BIT 54				
B14-20	B13-22		A8	22	BIT 55				
B13-6			P1	6	+HI				

12160 LOC: B14 NAME: PEC2

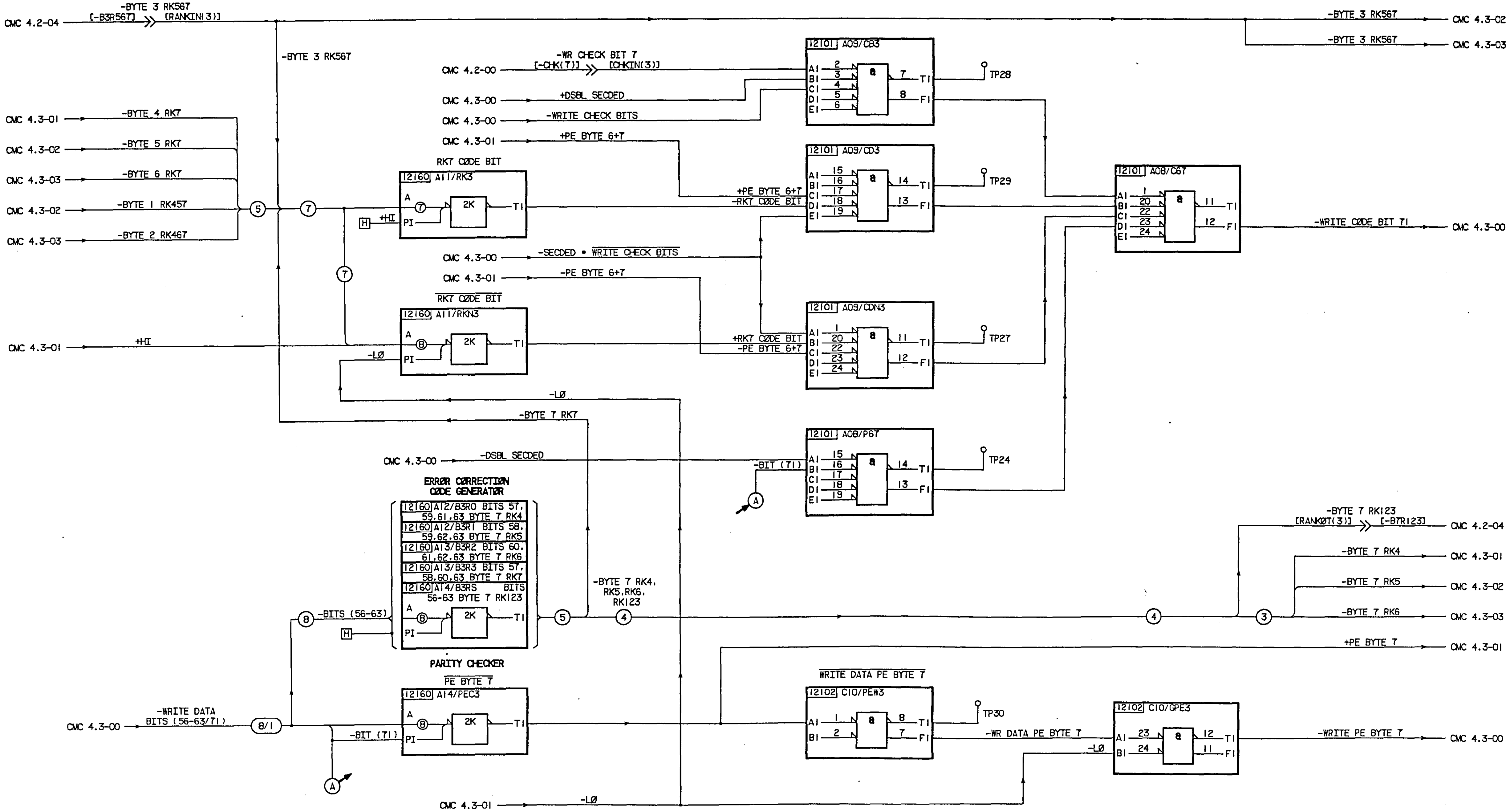
SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B14-1	D02-17		A1	17	BIT 48	11	T1	C10-18	
B14-2	B13-15		A2	16	BIT 49				
B14-3	B13-17		A3	15	BIT 50				
B14-4	B12-18		A4	14	BIT 51				
B14-5	B13-18		A5	13	BIT 52				
P1B-14	B14-24		A6	18	BIT 53				
P1B-13	B14-23		A7	19	BIT 54				
P1B-12	B14-22		A8	20	BIT 55				
P1B-11	B08-16		P1	12	BIT 70				

BIT 70 IS BYTE 6 PARITY

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.3-03
7BYH; A1T/3Y01 AD112-C

CODE IDENT 34010 D
DWG NO 60458190 REV J
SHEET CMC 4.3-03A 17-53



NOTES:

1. BACKUP CHART ON SHEET CMC 4.3-04A.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION
LEVEL 4 DIAGRAM-CMC 3.7
WRITE ERROR CORRECTION
CODE GENERATOR BYTE 7
7BYH:A1T/3Y01
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.3-04	17-54

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12160 LOC: A11 NAME: RK3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A11-01		T	A1	17	BYTE 4 RK 7	11	T1	A09-18	
A11-24		T	A2	18	BYTE 5 RK 7				
A11-23		T	A3	19	BYTE 6 RK 7				
A11-20		T	A4	20	BYTE 7 RK 7				
A11-05		T	A5	13	BYTE 1 RK457				
P1B-24	A11-02		A6	16	BYTE 2 RK467				
P1B-22	A11-04		A7	14	BYTE 3 RK567				
			A8	15					
TIE-HI			P1	12	+HI				

12160 LOC: A13 NAME: B3R3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A14-16	A12-17		A1	15	BIT 57	11	T1	A11-20	
A14-15	A12-02		A2	17	BIT 58				
A14-13	A13-01		A3	18	BIT 60				
A13-22	A12-22		A4	20	BIT 63				
			A5						
			A6						
			A7						
			A8						
TIE-HI	A12-12		P1	12	+HI				

12160 LOC: A11 NAME: RKN3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-11	A11-17		A1	1	BYTE 4 RK 7	7	T1	A09-20	
E13-11	A11-18		A2	24	BYTE 5 RK 7				
B13-11	A11-19		A3	23	BYTE 6 RK 7				
A13-11	A11-22		A4	22	BYTE 7 RK 7				
E11-14	A11-13		A5	5	BYTE 1 RK457				
A11-16	B11-17		A6	2	BYTE 2 RK467				
A11-14	B11-14		A7	4	BYTE 3 RK567				
P1B-38	B11-03		A8	3	+HI				
B11-6		T	P1	6	-L0				

12160 LOC: A14 NAME: B3RS

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P1B-10	A14-17		A1	1	BIT 56	7	T1	P1B-21	
P1B-09	A14-16		A2	2	BIT 57				
P1B-08	A14-15		A3	3	BIT 58				
P1B-07	A14-14		A4	4	BIT 59				
P1B-06	A14-13		A5	5	BIT 60				
A14-18	A13-24		A6	24	BIT 61				
A14-19	A13-23		A7	23	BIT 62				
P1B-02	A14-20		A8	22	BIT 63				
A13-06			P1	6	+HI				

12160 LOC: A12 NAME: B3R0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A13-15	A02-18		A1	17	BIT 57	11	T1	F11-14	
A14-14	A12-01		A2	18	BIT 59				
A13-24	A02-20		A3	19	BIT 61				
A12-22	C02-18		A4	20	BIT 63				
			A5						
			A6						
			A7						
			A8						
A13-12	A12-06		P1	12	+HI				

12160 LOC: A14 NAME: PEC3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A14-01	A02-17		A1	17	BIT 56	11	T1	C10-17	
A14-02	A13-15		A2	16	BIT 57				
A14-03	A13-17		A3	15	BIT 58				
A14-04	A12-18		A4	14	BIT 59				
A14-05	A13-18		A5	13	BIT 60				
P1B-04	A14-24		A6	18	BIT 61				
P1B-03	A14-23		A7	19	BIT 62				
A14-22	A13-22		A8	20	BIT 63				
P1B-01	A08-16		P1	12	BIT 71				

BIT 71 IS BYTE 7 PARITY

12160 LOC: A12 NAME: B3R1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A13-17	A02-19		A1	2	BIT 58	7	T1	E11-20	
A12-18	A02-02		A2	1	BIT 59				
A13-23	C02-17		A3	23	BIT 62				
A13-20	A12-20		A4	22	BIT 63				
			A5						
			A6						
			A7						
			A8						
A12-12	A13-06		P1	6	+HI				

12160 LOC: A13 NAME: B3R2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A13-18	A02-01		A1	1	BIT 60	7	T1	B11-16	
A14-24	A12-19		A2	24	BIT 61				
A14-23	A12-23		A3	23	BIT 62				
A14-20	A13-20		A4	22	BIT 63				
			A5						
			A6						
			A7						
			A8						
A12-06	A14-06		P1	6	+HI				

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.3 -04
7BYH; A1T/3Y01 AD112 - C

CODE IDENT 34010 D
DWG NO 60458190
REV J
SHEET CMC 4.3 -04A
17-55

LEFT ZIF ⚠1

BIT NAME		I/Ø	SHEET CMC 4.3-	TYPE	VIRTUAL PIN	REAL PIN
TDATA (0)	TWD (32)	Ø	00	D	Y80	P2A-28
FDATA (0)	FWD (32)				YA8	29
(1)	(33)				Y81	30
(1)	(33)				YA9	31
(2)	(34)				Y82	34
(2)	(34)				YAA	35
(3)	(35)				Y83	37
(3)	(35)				YAB	38
(4)	(36)				Y84	39
(4)	(36)				YAC	40
(5)	(37)				Y85	32
(5)	(37)				YAD	33
(6)	(38)				Y86	21
(6)	(38)				YAE	22
(7)	(39)				Y87	27
(7)	(39)				YAF	26
(8)	(40)				Y88	23
(8)	(40)				YB0	24
(9)	(41)				Y89	19
(9)	(41)				YB1	20
(10)	(42)				Y8A	14
(10)	(42)				YB2	15
(11)	(43)				Y8B	17
(11)	(43)				YB3	18
(12)	(44)				Y8C	08
(12)	(44)				YB4	09
(13)	(45)				Y8D	06
(13)	(45)				YB5	07
(14)	(46)				Y8E	13
(14)	(46)				YB6	12
(15)	(47)				Y8F	10
(15)	(47)				YB7	11
(16)	(48)				Y90	01
(16)	(48)				YB8	02
(17)	(49)				Y91	↓ 04
(17)	(49)				YB9	P2A-03
(18)	(50)				Y92	P1A-21
(18)	(50)				YBA	22
(19)	(51)				Y93	23
(19)	(51)				YBB	24
(20)	(52)				Y94	27
(20)	(52)				YBC	26
(21)	(53)				Y95	14
(21)	(53)				YBD	15
(22)	(54)				Y96	19
(22)	(54)				YBE	20
(23)	(55)				Y97	18
(23)	(55)				YBF	17
(24)	(56)				Y98	01
(24)	(56)				YC0	02
(25)	(57)				Y99	03
(25)	(57)				YC1	04
(26)	(58)				Y9A	06
(26)	(58)				YC2	07
(27)	(59)				Y9B	13
(27)	(59)				YC3	12
(28)	(60)				Y9C	10
(28)	(60)				YC4	11
(29)	(61)				Y9D	09
(29)	(61)				YC5	08
(30)	(62)				Y9E	28
↓ (30)	↓ (62)				YC6	29
TDATA (31)	TWD (63)				Y9F	31
FDATA (31)	FWD (63)				YC7	30
TDECC (0)	TDECC (68)				YA0	37
FDECC (0)	FDECC (68)				YC8	38
(1)	(69)				YA1	40
(1)	(69)				YC9	39
(2)	(70)				YA2	32
↓ (2)	↓ (70)				YCA	33
TDECC (3)	TDECC (71)	↓	↓	↓	YA3	↓ 35
FDECC (3)	FDECC (71)	Ø	00	D	YCB	P1A-34

ZIF GRØUND PINS			
P1A-05	P1A-25	P2A-05	P2A-25
P1A-16	P1A-36	P2A-16	P2A-36

CØAX ⚠1

BIT NAME		I/Ø	SHEET CMC 4.3-	TYPE	VIRTUAL PIN	REAL PIN
MCK	NCLKN (413)	I	00	C	Y24	P1C-80
PHM	CLKPM (76)	I			Y25	92
PARERR (0)	WDPERR (4)	Ø			YD0	98
(1)	(5)				YD1	97
↓ (2)	↓ (6)			↓	YD2	106
PARERR (3)	WDPERR (7)			C	YD3	105
PWPEØ	NU	↓			YE1	83
PWPE	NU	Ø	↓		YE2	↓ 79
PWPEI	NU	I	00		Y32	P1C-110

RIGHT ZIF ⚠1

BIT NAME		I/Ø	SHEET CMC 4.3-	TYPE	VIRTUAL PIN	REAL PIN
DATAIN (0)	DATA (32)	I	00	Z	Y00	P2B-35
(1)	(33)				Y01	34
(2)	(34)				Y02	33
(3)	(35)				Y03	32
(4)	(36)				Y04	31
(5)	(37)				Y05	30
(6)	(38)				Y06	29
(7)	(39)				Y07	28
(8)	(40)				Y08	26
(9)	(41)				Y09	24
(10)	(42)				Y0A	23
(11)	(43)				Y0B	22
(12)	(44)				Y0C	21
(13)	(45)				Y0D	20
(14)	(46)				Y0E	↓ 19
(15)	(47)				Y0F	P2B-18
(16)	(48)				Y10	P1B-20
(17)	(49)				Y11	19
(18)	(50)				Y12	18
(19)	(51)				Y13	17
(20)	(52)				Y14	15
(21)	(53)				Y15	14
(22)	(54)				Y16	13
(23)	(55)				Y17	12
(24)	(56)				Y18	10
(25)	(57)				Y19	09
(26)	(58)				Y1A	08
(27)	(59)				Y1B	07
(28)	(60)				Y1C	06
(29)	(61)				Y1D	04
↓ (30)	↓ (62)				Y1E	↓ 03
DATAIN (31)	DATA (63)				Y1F	P1B-02
PARIN (0)	PAR (68)				Y20	P2B-27
(1)	(69)				Y21	P2B-17
↓ (2)	↓ (70)		↓		Y22	P1B-11
PARIN (3)	PAR (71)		00		Y23	P1B-01
RANKIN (0)	B0R456		01		Y29	P2B-38
(1)	B1R457		02		Y2A	P2B-40
↓ (2)	B2R467		03		Y2B	P1B-24
RANKIN (3)	B3R567		04		Y2C	P1B-22
CHKIN (0)	CHK (4)		01		Y2D	P2B-07
(1)	(5)		02		Y2E	P2B-09
↓ (2)	↓ (6)		03		Y2F	P2B-11
CHKIN (3)	CHK (7)		04		Y30	P2B-13
DSD	EC20FØ (7)		00		Y27	P1B-35
RKBAIS	RKBIAS (1)		01	↓	Y31	P1B-38
WCB	WCB (1)	↓	00	Z	Y26	P1B-40
DPC	NU	I	01		Y28	P1B-37
RANKØT (0)	B4R012	Ø	01	Z	YD4	P2B-37
(1)	B5R013		02		YD5	P2B-39
↓ (2)	B6R023		03	↓	YD6	P1B-23
RANKØT (3)	B7R123		04	Z	YD7	P1B-21
CHKØUT (0)	NU		00		YD8	P2B-03
(1)					YD9	01
(2)					YDA	06
(3)					YDB	15
(4)					YDC	08
(5)					YDD	10
↓ (6)	↓				YDE	↓ 14
CHKØUT (7)	NU				YDF	P2B-12
HIS	RKBIAS (1)			Z	YE0	P1B-39
TDPAR (0)	TDPAR (68)			D	YA4	28
FDPAR (0)	FDPAR (68)				YCC	27
(1)	(69)				YA5	30
(1)	(69)				YCD	29
(2)	(70)				YA6	32
↓ (2)	↓ (70)				YCE	31
TDPAR (3)	TDPAR (71)	↓	↓	↓	YA7	↓ 34
FDPAR (3)	FDPAR (71)	Ø	00	D	YCF	P1B-33

ZIF GRØUND PINS			
P1B-05	P1B-25	P2B-05	P2B-25
P1B-16	P1B-36	P2B-16	P2B-36

NØTES:

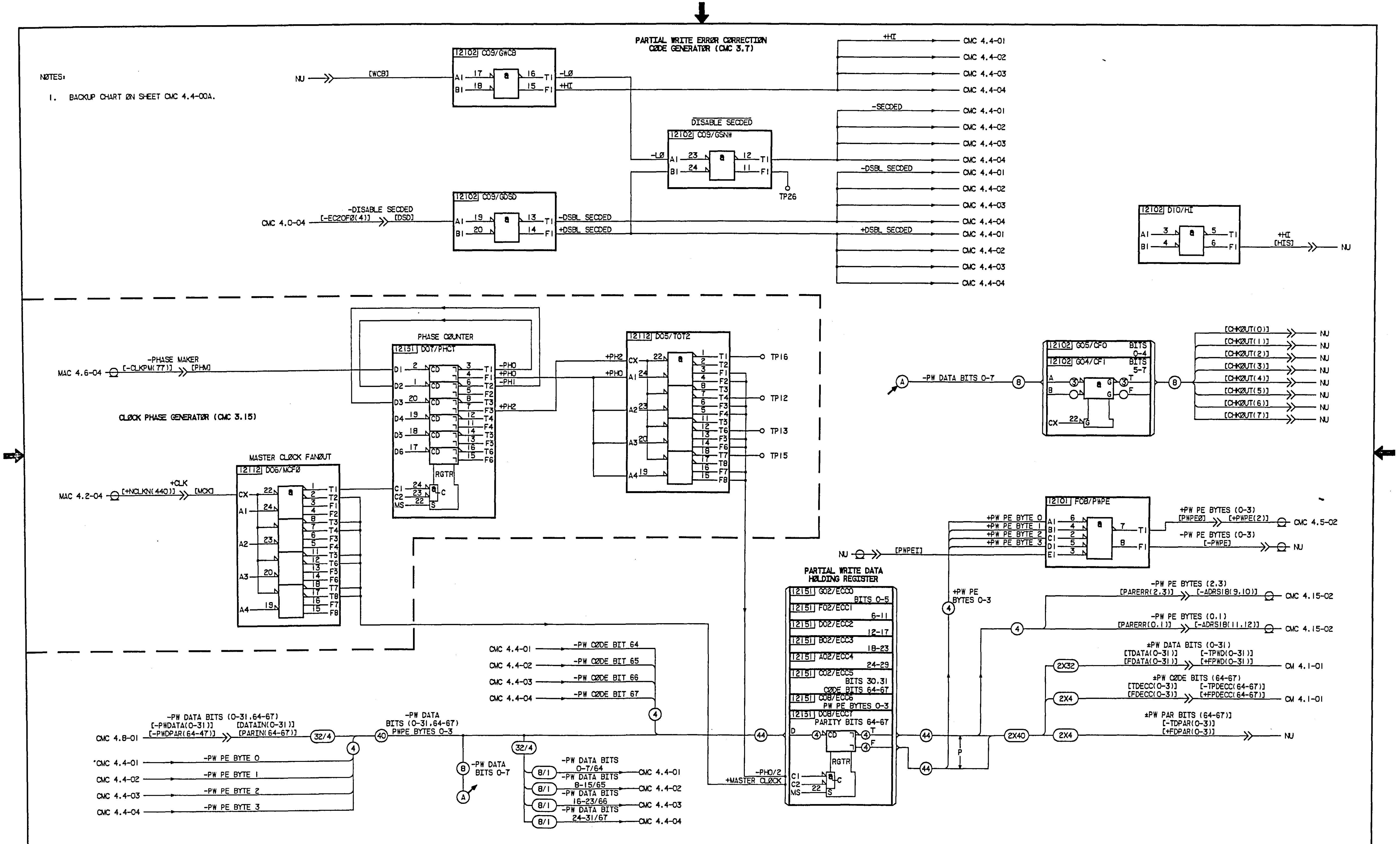
⚠1 CØNNECTØR TYPES:

C = CØAX
D = DIFFERENTIAL
Z = ZIF TØ FØIL ØN INTERCØNNECT BØARD

CONTROL DATA CORPORATION	LEVEL 4 CØNNECTØR CHART SUPPLEMENTAL WIRING INFØRMATIØN	CODE IDENT	DWG NØ 60458190	REV J
DEVELØPMENT DIVISIØN	7BYH:A1T/3Y01 AD112-C	SHEET CMC 4.3-CC	PAGE 17-56	

NØTES:

1. BACKUP CHART ØN SHEET CMC 4.4-00A.



CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.7.3.15 PARTIAL WRITE ERRØR CØRRECTIØN CØDE GEN, CLØCK PHASE GEN, PARTIAL WRITE DATA 0-31,64-67 7BYH,C1V/3Y02 AD112-C	CODE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN		SHEET CMC 4.4-00	PAGE 17-57	

12151 LOC: G02 NAME: ECC0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G05-17		T	D1	17	DATA	16	T1	P2A-28	
					BIT 0	15	F1	P2A-29	
G05-19		T	D2	18	BIT 1	14	T2	P2A-30	
						13	F2	P2A-31	
G05-23		T	D3	20	BIT 2	8	T3	P2A-34	
						7	F3	P2A-35	
G05-1		T	D4	1	BIT 3	6	T4	P2A-37	
						5	F4	P2A-38	
G05-3		T	D5	2	BIT 4	3	T5	P2A-39	
						4	F5	P2A-40	
G04-17		T	D6	19	BIT 5	12	T6	P2A-32	
						11	F6	P2A-33	
D05-3		T	C1	24	NØTE: C1 FRØM TOT2,PIN F1				
D06-7		T	C2	23	C2 FRØM MCFØ,PIN T4				
			MS	22					

12151 LOC: F02 NAME: ECC1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G04-23		T	D1	1	DATA	6	T1	P2A-21	
					BIT 6	5	F1	P2A-22	
G04-19		T	D2	2	BIT 7	3	T2	P2A-27	
						4	F2	P2A-26	
E14-17		T	D3	20	BIT 8	8	T3	P2A-23	
						7	F3	P2A-24	
E12-17		T	D4	19	BIT 9	12	T4	P2A-19	
						11	F4	P2A-20	
E12-2		T	D5	17	BIT 10	16	T5	P2A-14	
						15	F5	P2A-15	
E12-1		T	D6	18	BIT 11	14	T6	P2A-17	
						13	F6	P2A-18	
D05-4		T	C1	24	NØTE: C1 FRØM TOT2,PIN F2				
D06-8		T	C2	23	C2 FRØM MCFØ,PIN T3				
			MS	22					

12151 LOC: D02 NAME: ECC2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E13-1		T	D1	20	DATA	8	T1	P2A-8	
					BIT 12	7	F1	P2A-9	
E12-18		T	D2	19	BIT 13	12	T2	P2A-6	
						11	F2	P2A-7	
E12-23		T	D3	2	BIT 14	3	T3	P2A-13	
						4	F3	P2A-12	
E12-20		T	D4	1	BIT 15	6	T4	P2A-10	
						5	F4	P2A-11	
B14-17		T	D5	17	BIT 16	16	T5	P2A-1	
						15	F5	P2A-2	
B12-17		T	D6	18	BIT 17	14	T6	P2A-4	
						13	F6	P2A-3	
D05-15		T	C1	24	NØTE: C1 FRØM TOT2,PIN F8				
D06-12		T	C2	23	C2 FRØM MCFØ,PIN T6				
			MS	22					

12151 LOC: B02 NAME: ECC3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B12-2		T	D1	20	DATA	8	T1	P1A-21	
					BIT 18	7	F1	P1A-22	
B12-1		T	D2	1	BIT 19	6	T2	P1A-23	
						5	F2	P1A-24	
B13-1		T	D3	2	BIT 20	3	T3	P1A-27	
						4	F3	P1A-26	
B12-19		T	D4	17	BIT 21	16	T4	P1A-14	
						15	F4	P1A-15	
B12-23		T	D5	19	BIT 22	12	T5	P1A-19	
						11	F5	P1A-20	
B12-20		T	D6	18	BIT 23	14	T6	P1A-18	
						13	F6	P1A-17	
D05-14		T	C1	24	NØTE: C1 FRØM TOT2,PIN F6				
D06-17		T	C2	23	C2 FRØM MCFØ,PIN T8				
			MS	22					

12151 LOC: A02 NAME: ECC4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A14-17		T	D1	17	DATA	16	T1	P1A-1	
					BIT 24	15	F1	P1A-2	
A12-17		T	D2	18	BIT 25	14	T2	P1A-3	
						13	F2	P1A-4	
A12-2		T	D3	19	BIT 26	12	T3	P1A-6	
						11	F3	P1A-7	
A12-1		T	D4	2	BIT 27	3	T4	P1A-13	
						4	F4	P1A-12	
A13-1		T	D5	1	BIT 28	6	T5	P1A-10	
						5	F5	P1A-11	
A12-18		T	D6	20	BIT 29	8	T6	P1A-9	
						7	F6	P1A-8	
D05-13		T	C1	24	NØTE: C1 FRØM TOT2,PIN F5				
D06-18		T	C2	23	C2 FRØM MCFØ,PIN T7				
			MS	22					

12151 LOC: C02 NAME: ECC5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A12-23		T	D1	17	DATA	16	T1	P1A-28	
					BIT 30	15	F1	P1A-29	
A12-20		T	D2	18	BIT 31	14	T2	P1A-31	
						13	F2	P1A-30	
F08-12		T	D3	1	CØDE	6	T3	P1A-37	
					BIT 64	5	F3	P1A-38	
E08-12		T	D4	2	CØDE	3	T4	P1A-40	
					BIT 65	4	F4	P1A-39	
B08-12		T	D5	18	CØDE	12	T5	P1A-32	
					BIT 66	11	F5	P1A-33	
A08-12		T	D6	20	CØDE	8	T6	P1A-35	
					BIT 67	7	F6	P1A-34	
D05-5		T	C1	24	NØTE: C1 FRØM TOT2,PIN F4				
D06-11		T	C2	23	C2 FRØM MCFØ,PIN T5				
			MS	22					

12151 LOC: C08 NAME: ECC6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D10-12		T	D1	20	PW PE	8	T1	P1C-98	
					BYTE 0	7	F1	F08-06	
D10-13		T	D2	19	PW PE	12	T2	P1C-97	
					BYTE 1	11	F2	F08-04	
C10-13		T	D3	17	PW PE	16	T3	P1C-106	
					BYTE 2	15	F3	F08-02	
C10-12		T	D4	18	PW PE	14	T4	P1C-105	
					BYTE 3	13	F4	F08-05	
			D5	1		6	T5		
						5	F5		
			D6	2		3	T6		
						4	F6		
D05-16		T	C1	24	NØTE: C1 FRØM TOT2,PIN F7				
D06-2	D08-23		C2	23	C2 FRØM MCFØ,PIN T2				
			MS	22					

12151 LOC: D08 NAME: ECC7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F08-16		T	D1	1	PARITY	6	T1	P1B-28	
					BIT 64	5	F1	P1B-27	
E08-16		T	D2	2	PARITY	3	T2	P1B-30	
					BIT 65	4	F2	P1B-29	
B08-16		T	D3	18	PARITY	14	T3	P1B-32	
					BIT 66	13	F3	P1B-31	
A08-16		T	D4	17	PARITY	16	T4	P1B-34	
					BIT 67	15	F4	P1B-33	
			D5	19		12	T5		
						11	F5		
			D6	20		8	T6		
						7	F6		
D05-6		T	C1	24	NØTE: C1 FRØM TOT2,PIN F3				
C08-23		T	C2	23	C2 FRØM MCFØ,PIN T2				
			MS	22					

12102 LOC: G05 NAME: CF0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F14-17	G02-17		A1	17	PW CHECK	16	T1	P2B-3	
			B1	18	BIT 0	15	F1	TERM	
F12-17	G02-18		A2	19	PW CHECK	13	T2	P2B-1	
			B2	20	BIT 1	14	F2	TERM	
F12-2	G02-20		A3	23	PW CHECK	12	T3	P2B-6	
			B3	24	BIT 2	11	F3	TERM	
F12-1	G02-1		A4	1	PW CHECK	8	T4	P2B-15	
			B4	2	BIT 3	7	F4	TERM	
F13-1	G02-2		A5	3	PW CHECK	5	T5	P2B-8	
			B5	4	BIT 4	6	F5	TERM	
			CX	22					

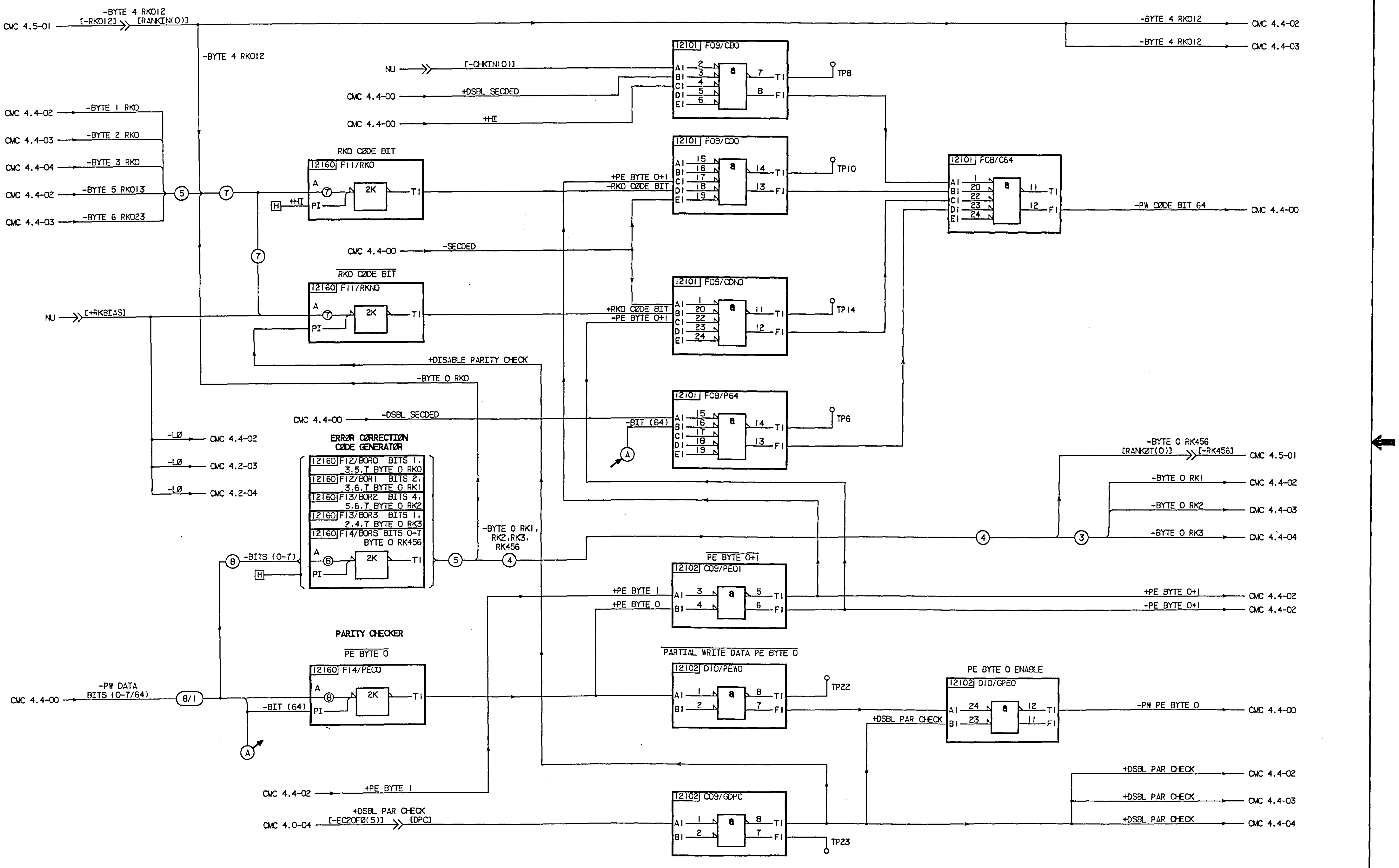
12102 LOC: G04 NAME: CF1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F12-19	G02-19		A1	17	PW CHECK	16	T1	P2B-10	
			B1	18	BIT 5	15	F1	TERM	
F12-23	F02-1		A2	23	PW CHECK	12	T2	P2B-14	
			B2	24	BIT 6	11	F2	TERM	
F12-20	F02-2		A3	19	PW CHECK	13	T3	P2B-12	
			B3	20	BIT 7	14	F3	TERM	
			A4	1		8	T4		
			B4	2		7	F4		
			A5	3		5	T5		
			B5	4		6	F5		
			CX	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.4-00
7BYH; CIV/3Y02
AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.4-00A
17-58



NØTES:

1. BACKUP CHART ØN SHEET CMC 4.4-01A.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.7 PARTIAL WRITE ERRØR CØRRECTIØN CØDE GENERATØR BYTE 0 7BYH:C1V/3Y02	CAGE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	AD112-C	SHEET CMC 4.4-01	PAGE 17-59	

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12160 LOC: F11 NAME: RKO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F12-11	F11-22		A1	20	BYTE 0 RKO	11	T1	F9-18	
F11-24		T	A2	18	BYTE 1 RKO				
B12-11	F11-5		A3	13	BYTE 2 RKO				
A12-11	F11-4		A4	14	BYTE 3 RKO				
F11-2	E11-5		A5	16	BYTE 4 RK012				
F11-1	E11-4		A6	17	BYTE 5 RK013				
F11-23		T	A7	19	BYTE 6 RK023				
			A8	15					
TIE-HI			P1	12	+HI				

12160 LOC: F11 NAME: RKNO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F11-20		T	A1	22	BYTE 0 RKO	7	T1	F9-20	
E12-11	F11-18		A2	24	BYTE 1 RKO				
F11-13		T	A3	5	BYTE 2 RKO				
F11-14		T	A4	4	BYTE 3 RKO				
P2B-38	F11-16		A5	2	BYTE 4 RK012				
P2B-40	F11-17		A6	1	BYTE 5 RK013				
B11-1	F11-19		A7	23	BYTE 6 RK023				
E11-3		T	A8	3	+HI				
D10-20	E11-6		P1	6	-L0				

12160 LOC: F12 NAME: BORO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-15	G05-19		A1	17	BIT 1	11	T1	F11-20	
F14-14	F12-1		A2	18	BIT 3				
F13-24	G04-17		A3	19	BIT 5				
F12-22	G04-19		A4	20	BIT 7				
			A5						
			A6						
			A7						
			A8						
F13-12	F11-12		P1	12	+HI				

12160 LOC: F12 NAME: BOR1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-17	G05-23		A1	2	BIT 2	7	T1	E11-1	
F12-18	G05-1		A2	1	BIT 3				
F13-23	G04-23		A3	23	BIT 6				
F13-20	F12-20		A4	22	BIT 7				
			A5						
			A6						
			A7						
			A8						
TIE-HI			P1	6	+HI				

12160 LOC: F13 NAME: BOR2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-18	G05-3		A1	1	BIT 4	7	T1	B11-22	
F14-18	F12-19		A2	24	BIT 5				
F14-19	F12-23		A3	23	BIT 6				
F14-20	F13-20		A4	22	BIT 7				
			A5						
			A6						
			A7						
			A8						
F14-6	F12-6		P1	6	+HI				

12160 LOC: F13 NAME: BOR3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F14-16	F12-17		A1	15	BIT 1	11	T1	A11-1	
F14-15	F12-2		A2	17	BIT 2				
F14-13	F13-1		A3	18	BIT 4				
F13-22	F12-22		A4	20	BIT 7				
			A5						
			A6						
			A7						
			A8						
TIE-HI	F12-12		P1	12	+HI				

12160 LOC: F14 NAME: BORS

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P2B-35	F14-17		A1	1	BIT 0	7	T1	P2B-37	
P2B-34	F14-16		A2	2	BIT 1				
P2B-33	F14-15		A3	3	BIT 2				
P2B-32	F14-14		A4	4	BIT 3				
P2B-31	F14-13		A5	5	BIT 4				
P2B-30	F14-18		A6	24	BIT 5				
P2B-29	F14-19		A7	23	BIT 6				
P2B-28	F14-20		A8	22	BIT 7				
TIE-HI	F13-6		P1	6	+HI				

12160 LOC: F14 NAME: PECO

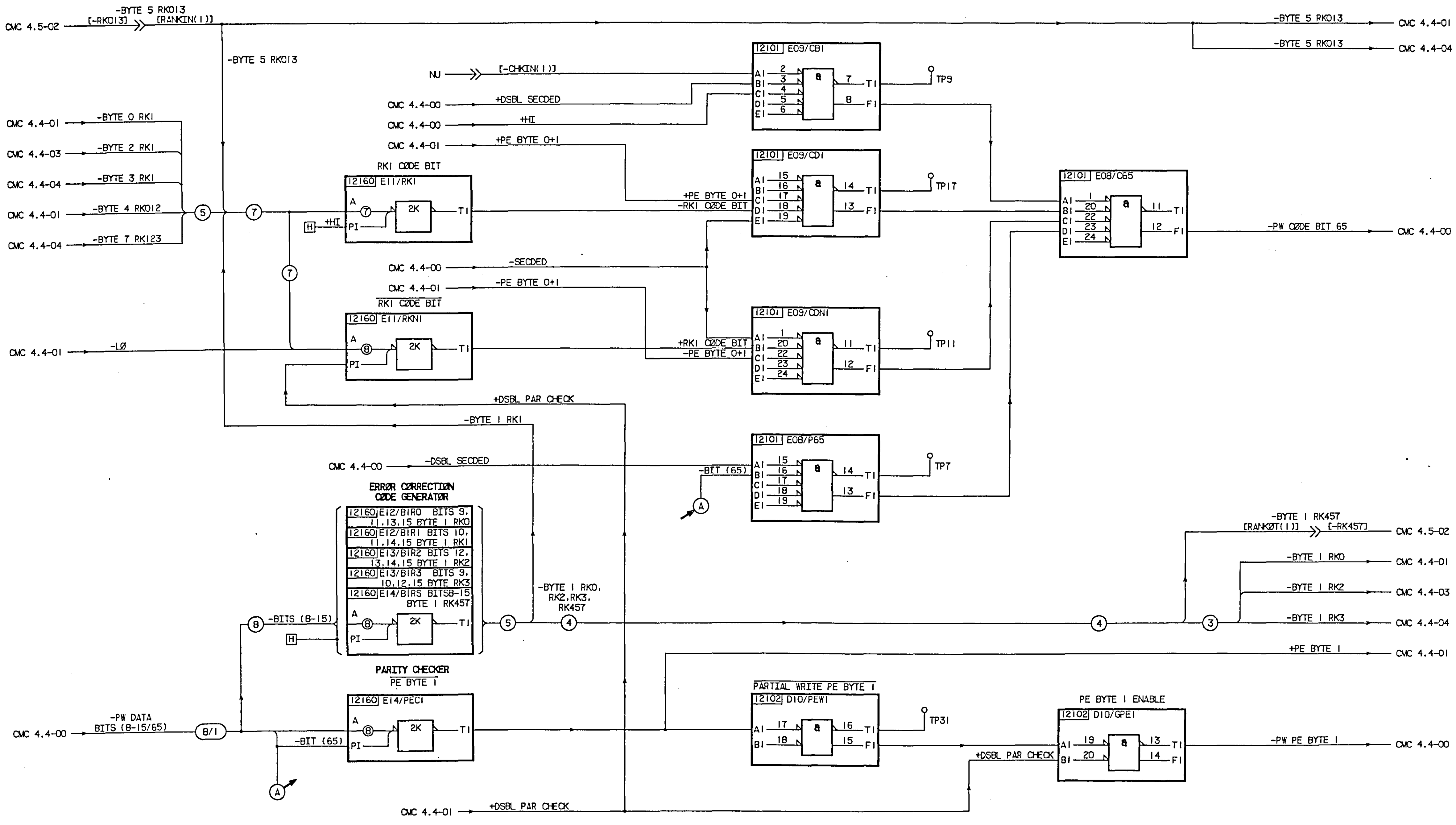
SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F14-1	G05-17		A1	17	BIT 0	11	T1	D10-1	
F14-2	F13-15		A2	16	BIT 1				
F14-3	F13-17		A3	15	BIT 2				
F14-4	F12-18		A4	14	BIT 3				
F14-5	F13-18		A5	13	BIT 4				
F14-24	F13-24		A6	18	BIT 5				
F14-23	F13-23		A7	19	BIT 6				
F14-22	F13-22		A8	20	BIT 7				
P2B-27	F08-16		P1	12	BIT 64				

BIT 64 IS
BYTE 0 PARITY

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.4-01
7BYH; C1V/3Y02
AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.4-01A
17-60



NOTES:

1. BACKUP CHART ON SHEET CMC 4.4-02A.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.7
PARTIAL WRITE ERROR CORRECTION
CODE GENERATOR BYTE 1
7BYH:C1V/3Y02

AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.4-02	17-61

REVISION RECORD

REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12160 LOC: E11 NAME: RK1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E11-1		T	A1	17	BYTE 0 RK1	11	T1	E9-18	
E11-24		T	A2	18	BYTE 1 RK1				
B12-7	E11-23		A3	19	BYTE 2 RK1				
A12-7	E11-22		A4	20	BYTE 3 RK1				
E11-5	B11-5		A5	13	BYTE 4 RK012				
E11-4	A11-5		A6	14	BYTE 5 RK013				
B11-4	E11-2		A7	16	BYTE 7 RK123				
			A8	15					
TIE-HI			P1	12	+HI				

12160 LOC: E11 NAME: RKN1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F12-7	E11-17		A1	1	BYTE 0 RK1	7	T1	E9-20	
E12-7	E11-18		A2	24	BYTE 1 RK1				
E11-19		T	A3	23	BYTE 2 RK1				
E11-20		T	A4	22	BYTE 3 RK1				
F11-16	E11-13		A5	5	BYTE 4 RK012				
F11-17	E11-14		A6	4	BYTE 5 RK013				
E11-16		T	A7	2	BYTE 7 RK123				
B11-3	F11-3		A8	3	+HI				
F11-6	C10-24		P1	6	-L0				

12160 LOC: E12 NAME: BIR0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E13-15	F02-19		A1	17	BIT 9	11	T1	F11-24	
E14-14	E12-1		A2	18	BIT 11				
E13-24	D02-19		A3	19	BIT 13				
E12-22	D02-1		A4	20	BIT 15				
			A5						
			A6						
			A7						
			A8						
TIE-HI	E13-12		P1	12	+HI				

12160 LOC: E12 NAME: BIR1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E13-17	F02-17		A1	2	BIT 10	7	T1	E11-24	
E12-18	F02-18		A2	1	BIT 11				
E13-23	D02-2		A3	23	BIT 14				
E13-20	E12-20		A4	22	BIT 15				
			A5						
			A6						
			A7						
			A8						
TIE-HI	E13-6		P1	6	+HI				

12160 LOC: E13 NAME: BIR2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E13-18	D02-20		A1	1	BIT 12	7	T1	B11-23	
E14-18	E12-19		A2	24	BIT 13				
E14-19	E12-23		A3	23	BIT 14				
E14-20	E13-20		A4	22	BIT 15				
			A5						
			A6						
			A7						
			A8						
E12-6	E14-6		P1	6	+HI				

12160 LOC: E13 NAME: BIR3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E14-16	E12-17		A1	15	BIT 9	11	T1	A11-24	
E14-15	E12-2		A2	17	BIT 10				
E14-13	E13-1		A3	18	BIT 12				
E13-22	E12-22		A4	20	BIT 15				
			A5						
			A6						
			A7						
			A8						
E12-12			P1	12	+HI				

12160 LOC: E14 NAME: BIR5

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P2B-26	E14-17		A1	1	BIT 8	7	T1	P2B-39	
P2B-24	E14-16		A2	2	BIT 9				
P2B-23	E14-15		A3	3	BIT 10				
P2B-22	E14-14		A4	4	BIT 11				
P2B-21	E14-13		A5	5	BIT 12				
P2B-20	E14-18		A6	24	BIT 13				
P2B-19	E14-19		A7	23	BIT 14				
P2B-18	E14-20		A8	22	BIT 15				
E13-6			P1	6	+HI				

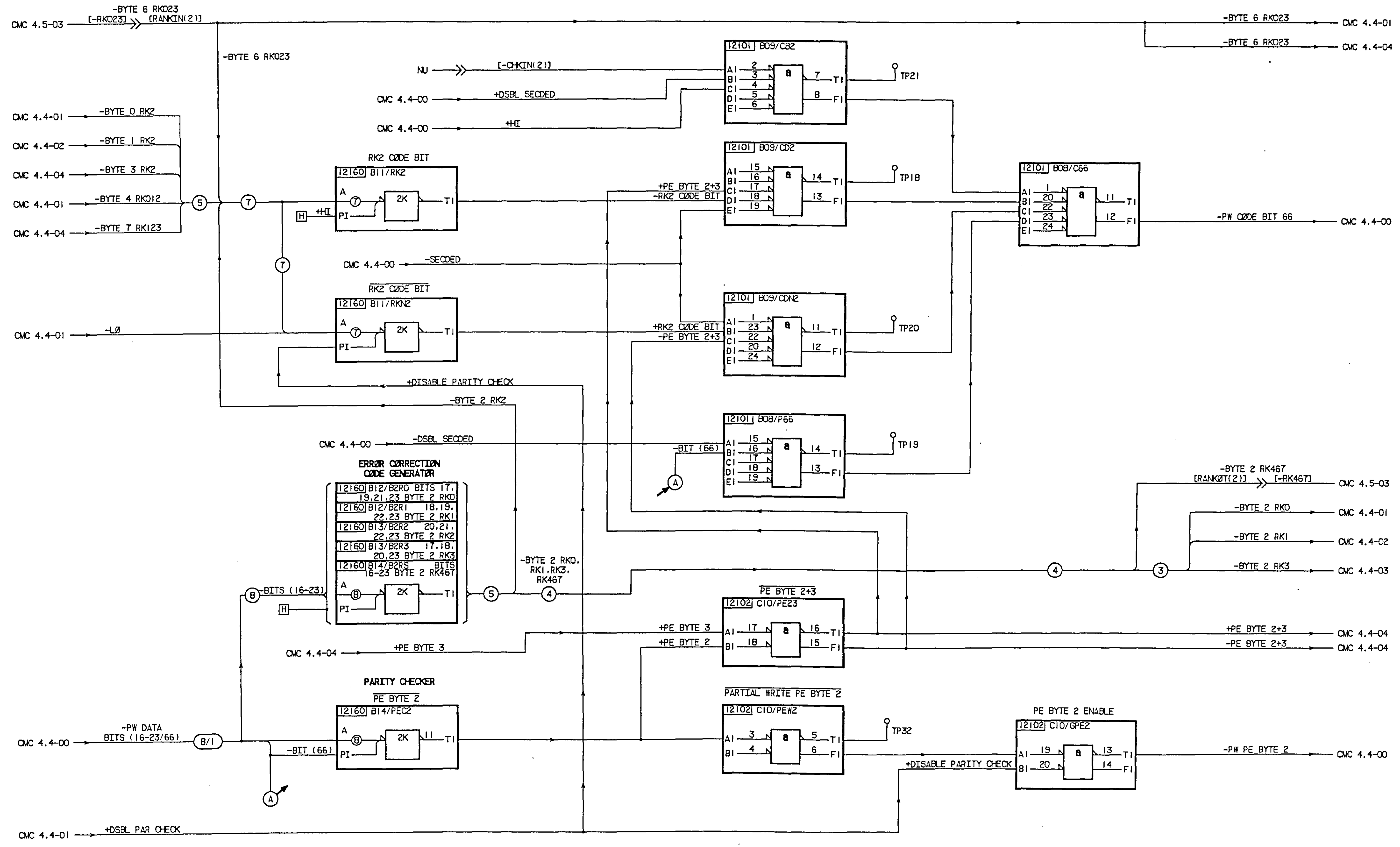
12160 LOC: E14 NAME: PEC1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E14-1	F2-20		A1	17	BIT 8	11	T1	D10-17	
E14-2	E13-15		A2	16	BIT 9				
E14-3	E13-17		A3	15	BIT 10				
E14-4	E12-18		A4	14	BIT 11				
E14-5	E13-18		A5	13	BIT 12				
E14-24	E13-24		A6	18	BIT 13				
E14-23	E13-23		A7	19	BIT 14				
E14-22	E13-22		A8	20	BIT 15	BIT 65 IS			
P2B-17	E08-16		P1	12	BIT 65	BYTE 1 PARITY			

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.4-02
7BYH; C1V/3Y02
AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.4-02A
17-62



NOTES:

1. BACKUP CHART ON SHEET CMC 4.4-03A.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM - CMC 3.7 PARTIAL WRITE ERROR CORRECTION CODE GENERATOR BYTE 2. 7BYH:C1V/3Y02	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION	AD112-C	SHEET CMC 4.4-03	PAGE 17-63	

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12160 LOC: B11 NAME: RK2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B11-22		T	A1	20	BYTE 0 RK2	11	T1	B09-18	
B11-23		T	A2	19	BYTE 1 RK2				
B11-24		T	A3	18	BYTE 2 RK2				
A13-7	B11-2		A4	16	BYTE 3 RK2				
B11-5		T	A5	13	BYTE 4 RK012				
A11-2	B11-1		A6	17	BYTE 6 RK023				
A11-4	B11-4		A7	14	BYTE 7 RK123				
			A8	15					
TIE-HI			P1	12	+HI				

12160 LOC: B13 NAME: B2R3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B14-16	B12-17		A1	15	BIT 17	11	T1	A11-23	
B14-15	B12-2		A2	17	BIT 18				
B14-13	B13-1		A3	18	BIT 20				
B13-22	B12-22		A4	20	BIT 23				
			A5						
			A6						
			A7						
			A8						
TIE-HI			P1	12	+HI				

12160 LOC: B11 NAME: RKN2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-7	B11-20		A1	22	BYTE 0 RK2	7	T1	B09-23	
E13-7	B11-19		A2	23	BYTE 1 RK2				
B13-7	B11-18		A3	24	BYTE 2 RK2				
B11-16		T	A4	2	BYTE 3 RK2				
E11-13	B11-13		A5	5	BYTE 4 RK012				
B11-17	F11-23		A6	1	BYTE 6 RK023				
B11-14	E11-16		A7	4	BYTE 7 RK123				
A11-3	E11-3		A8	3	+HI				
C10-20	A11-6		P1	6	-L0				

12160 LOC: B14 NAME: B2RS

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P1B-20	B14-17		A1	1	BIT 16	7	T1	P1B-23	
P1B-19	B14-16		A2	2	BIT 17				
P1B-18	B14-15		A3	3	BIT 18				
P1B-17	B14-14		A4	4	BIT 19				
P1B-15	B14-13		A5	5	BIT 20				
B14-18	B13-24		A6	24	BIT 21				
B14-19	B13-23		A7	23	BIT 22				
B14-20	B13-22		A8	22	BIT 23				
B13-6			P1	6	+HI				

12160 LOC: B12 NAME: B2R0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B13-15	D02-18		A1	17	BIT 17	11	T1	F11-13	
B14-14	B12-1		A2	18	BIT 19				
B13-24	B02-17		A3	19	BIT 21				
B12-22	B02-18		A4	20	BIT 23				
			A5						
			A6						
			A7						
			A8						
TIE-HI	B12-6		P1	12	+HI				

12160 LOC: B14 NAME: PEC2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B14-1	D02-17		A1	17	BIT 16	11	T1	C10-18	
B14-2	B13-15		A2	16	BIT 17				
B14-3	B13-17		A3	15	BIT 18				
B14-4	B12-18		A4	14	BIT 19				
B14-5	B13-18		A5	13	BIT 20				
P1B-14	B14-24		A6	18	BIT 21				
P1B-13	B14-23		A7	19	BIT 22				
P1B-12	B14-22		A8	20	BIT 23				
P1B-11	B08-16		P1	12	BIT 66				

BIT 66 IS
BYTE 2 PARITY

12160 LOC: B12 NAME: B2R1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B13-17	B02-20		A1	2	BIT 18	7	T1	E11-19	
B12-18	B02-1		A2	1	BIT 19				
B13-23	B02-19		A3	23	BIT 22				
B13-20	B12-20		A4	22	BIT 23				
			A5						
			A6						
			A7						
			A8						
B12-12	B13-6		P1	6	+HI				

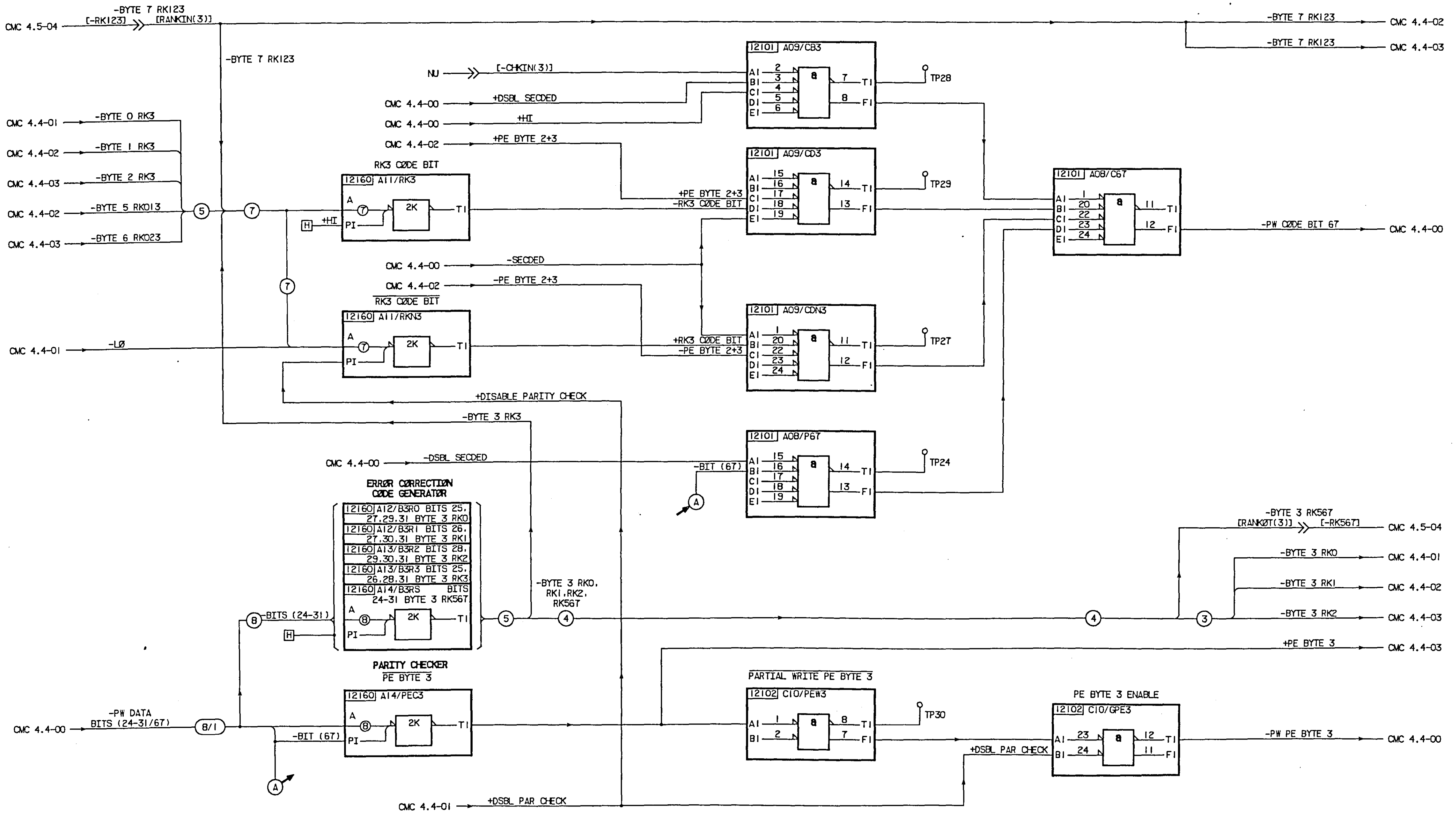
12160 LOC: B13 NAME: B2R2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B13-18	B02-2		A1	1	BIT 20	7	T1	B11-24	
B14-24	B12-19		A2	24	BIT 21				
B14-23	B12-23		A3	23	BIT 22				
B14-22	B13-20		A4	22	BIT 23				
			A5						
			A6						
			A7						
			A8						
B12-6	B14-6		P1	6	+HI				

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.4-03
7BYH; C1V/3Y02
AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.4-03A
17-64



NOTES:

1. BACKUP CHART ON SHEET CMC 4.4-04A.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.7 PARTIAL WRITE ERROR CORRECTION CODE GENERATOR BYTE 3 7BYH:C1V/3Y02	CODE IDENT DWG NO 60458190	REV J
DEVELOPMENT DIVISION	AD112-C	SHEET CMC 4.4-04	PAGE 17-65

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12160 LOC: A11 NAME: RK3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A11-1		T	A1	17	BYTE 0 RK3	11	T1	A09-18	
A11-24		T	A2	18	BYTE 1 RK3				
A11-23		T	A3	19	BYTE 2 RK3				
A11-20		T	A4	20	BYTE 3 RK3				
A11-5		T	A5	13	BYTE 5 RK013				
P1B-24	A11-2		A6	16	BYTE 6 RK023				
P1B-22	A11-4		A7	14	BYTE 7 RK123				
			A8	15					
TIE-HI			PI	12	+HI				

12160 LOC: A13 NAME: B3R3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A14-16	A12-17		A1	15	BIT 25	11	T1	A11-20	
A14-15	A12-2		A2	17	BIT 26				
A14-13	A13-1		A3	18	BIT 28				
A13-22	A12-22		A4	20	BIT 31				
			A5						
			A6						
			A7						
			A8						
TIE-HI	A12-12		PI	12	+HI				

12160 LOC: A11 NAME: RKN3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-11	A11-17		A1	1	BYTE 0 RK3	7	T1	A09-20	
E13-11	A11-18		A2	24	BYTE 1 RK3				
B13-11	A11-19		A3	23	BYTE 2 RK3				
A13-11	A11-22		A4	22	BYTE 3 RK3				
E11-14	A11-13		A5	5	BYTE 5 RK013				
A11-16	B11-17		A6	2	BYTE 6 RK023				
A11-14	B11-14		A7	4	BYTE 7 RK123				
P1B-38	B11-3		A8	3	+HI				
B11-6		T	PI	6	-L0				

12160 LOC: A14 NAME: B3R5

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P1B-10	A14-17		A1	1	BIT 24	7	T1	P1B-21	
P1B-9	A14-16		A2	2	BIT 25				
P1B-8	A14-15		A3	3	BIT 26				
P1B-7	A14-14		A4	4	BIT 27				
P1B-6	A14-13		A5	5	BIT 28				
A14-18	A13-24		A6	24	BIT 29				
A14-19	A13-23		A7	23	BIT 30				
P1B-2	A14-20		A8	22	BIT 31				
A13-6			PI	6	+HI				

12160 LOC: A12 NAME: B3R0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A13-15	A02-18		A1	17	BIT 25	11	T1	F11-14	
A14-14	A12-1		A2	18	BIT 27				
A13-24	A02-20		A3	19	BIT 29				
A12-22	C02-18		A4	20	BIT 31				
			A5						
			A6						
			A7						
			A8						
A13-12	A12-6		PI	12	+HI				

12160 LOC: A14 NAME: PEC3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A14-1	A02-17		A1	17	BIT 24	11	T1	C10-17	
A14-2	A13-15		A2	16	BIT 25				
A14-3	A13-17		A3	15	BIT 26				
A14-4	A12-18		A4	14	BIT 27				
A14-5	A13-18		A5	13	BIT 28				
P1B-4	A14-24		A6	18	BIT 29				
P1B-3	A14-23		A7	19	BIT 30				
A14-22	A13-22		A8	20	BIT 31	BIT 67 IS BYTE 3 PARITY			
P1B-1	A08-16		PI	12	BIT 67				

12160 LOC: A12 NAME: B3R1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A13-17	A02-19		A1	2	BIT 26	7	T1	E11-20	
A12-18	A02-2		A2	1	BIT 27				
A13-23	C02-17		A3	23	BIT 30				
A13-20	A12-20		A4	22	BIT 31				
			A5						
			A6						
			A7						
			A8						
A12-12	A13-6		PI	6	+HI				

12160 LOC: A13 NAME: B3R2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A13-18	A02-1		A1	1	BIT 28	7	T1	B11-16	
A14-24	A12-19		A2	24	BIT 29				
A14-23	A12-23		A3	23	BIT 30				
A14-20	A13-20		A4	22	BIT 31				
			A5						
			A6						
			A7						
			A8						
A12-6	A14-6		PI	6	+HI				

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.4-04
7BYH; CIV/3Y02 AD112-C

CODE IDENT 34010
D
DWG NO .60458190
REV J
SHEET CMC 4.4-04A
17-66

LEFT ZIF △1

BIT NAME		I/Ø	SHEET CMC 4.4-	TYPE	VIRTUAL PIN	REAL PIN
TDATA (0)	TPWD (0)	Ø	00	D	Y80	P2A-28
FDATA (0)	FPWD (0)				YA8	29
(1)	(1)				Y81	30
(1)	(1)				YA9	31
(2)	(2)				Y82	34
(2)	(2)				YAA	35
(3)	(3)				Y83	37
(3)	(3)				YAB	38
(4)	(4)				Y84	39
(4)	(4)				YAC	40
(5)	(5)				Y85	32
(5)	(5)				YAD	33
(6)	(6)				Y86	21
(6)	(6)				YAE	22
(7)	(7)				Y87	27
(7)	(7)				YAF	26
(8)	(8)				Y88	23
(8)	(8)				YB0	24
(9)	(9)				Y89	19
(9)	(9)				YB1	20
(10)	(10)				Y8A	14
(10)	(10)				YB2	15
(11)	(11)				Y8B	17
(11)	(11)				YB3	18
(12)	(12)				Y8C	08
(12)	(12)				YB4	09
(13)	(13)				Y8D	06
(13)	(13)				YB5	07
(14)	(14)				Y8E	13
(14)	(14)				YB6	12
(15)	(15)				Y8F	10
(15)	(15)				YB7	11
(16)	(16)				Y90	01
(16)	(16)				YB8	02
(17)	(17)				Y91	↓ 04
(17)	(17)				YB9	P2A-03
(18)	(18)				Y92	P1A-21
(18)	(18)				YBA	22
(19)	(19)				Y93	23
(19)	(19)				YBB	24
(20)	(20)				Y94	27
(20)	(20)				YBC	26
(21)	(21)				Y95	14
(21)	(21)				YBD	15
(22)	(22)				Y96	19
(22)	(22)				YBE	20
(23)	(23)				Y97	18
(23)	(23)				YBF	17
(24)	(24)				Y98	01
(24)	(24)				YC0	02
(25)	(25)				Y99	03
(25)	(25)				YC1	04
(26)	(26)				Y9A	06
(26)	(26)				YC2	07
(27)	(27)				Y9B	13
(27)	(27)				YC3	12
(28)	(28)				Y9C	10
(28)	(28)				YC4	11
(29)	(29)				Y9D	09
(29)	(29)				YC5	08
(30)	(30)				Y9E	28
↓ (30)	↓ (30)				YC6	29
TDATA (31)	TPWD (31)				Y9F	31
FDATA (31)	FPWD (31)				YC7	30
TDECC (0)	TPDECC (64)				YA0	37
FDECC (0)	FPDECC (64)				YC8	38
(1)	(65)				YA1	40
(1)	(65)				YC9	39
(2)	(66)				YA2	32
↓ (2)	↓ (66)				YCA	33
TDECC (3)	TPDECC (67)	↓	↓	↓	YA3	↓ 35
FDECC (3)	FPDECC (67)	Ø	00	D	YCB	P1A-34

ZIF GRØUND PINS			
P1A-05	P1A-25	P2A-05	P2A-25
P1A-16	P1A-36	P2A-16	P2A-36

CØAX △1

BIT NAME		I/Ø	SHEET CMC 4.4-	TYPE	VIRTUAL PIN	REAL PIN
MCK	NCLK (440)	I	00	C	Y24	P1C-80
PHM	CLKPM (77)	I			Y25	92
PARERR (0)	ADRS18 (9)	Ø			YD0	98
(1)	(10)				YD1	97
(2)	(11)				YD2	106
↓ (3)	↓ (12)			↓	YD3	105
PWPEØ	PWPE (0)	↓		C	YE1	83
PWPE	NU	Ø	↓		YE2	↓ 79
PWPEI	NU	I	00		Y32	P1C-110

RIGHT ZIF △1

BIT NAME		I/Ø	SHEET CMC 4.4-	TYPE	VIRTUAL PIN	REAL PIN
DATAIN (0)	PWDATA (0)	I	00	Z	Y00	P2B-35
(1)	(1)				Y01	34
(2)	(2)				Y02	33
(3)	(3)				Y03	32
(4)	(4)				Y04	31
(5)	(5)				Y05	30
(6)	(6)				Y06	29
(7)	(7)				Y07	28
(8)	(8)				Y08	26
(9)	(9)				Y09	24
(10)	(10)				Y0A	23
(11)	(11)				Y0B	22
(12)	(12)				Y0C	21
(13)	(13)				Y0D	20
(14)	(14)				Y0E	↓ 19
(15)	(15)				Y0F	P2B-18
(16)	(16)				Y10	P1B-20
(17)	(17)				Y11	19
(18)	(18)				Y12	18
(19)	(19)				Y13	17
(20)	(20)				Y14	15
(21)	(21)				Y15	14
(22)	(22)				Y16	13
(23)	(23)				Y17	12
(24)	(24)				Y18	10
(25)	(25)				Y19	09
(26)	(26)				Y1A	08
(27)	(27)				Y1B	07
(28)	(28)				Y1C	06
(29)	(29)				Y1D	04
↓ (30)	↓ (30)				Y1E	↓ 03
DATAIN (31)	PWDATA (31)				Y1F	P1B-02
PARIN (0)	PWDPAR (64)				Y20	P2B-27
(1)	(65)				Y21	P2B-17
(2)	(66)		↓		Y22	P1B-11
↓ (3)	↓ (67)		00		Y23	P1B-01
RANKIN (0)	B4R012		01		Y29	P2B-38
(1)	B5R013		02		Y2A	P2B-40
(2)	B6R023		03	↓	Y2B	P1B-24
↓ (3)	B7R123		04	Z	Y2C	P1B-22
CHKIN (0)	NU		01		Y2D	P2B-07
(1)			02		Y2E	P2B-09
(2)			03		Y2F	P2B-11
↓ (3)	↓		04		Y30	P2B-13
DSD	EC20FØ (4)		00	C	Y27	P1B-35
RKBIAS	NU		01		Y31	P1B-38
WCB	NU	↓			Y26	P1B-40
DPC	EP20FØ (5)	I	↓	C	Y28	P1B-37
RANKØT (0)	B0R456	Ø	01	Z	YD4	P2B-37
(1)	B1R457		02		YD5	P2B-39
(2)	B2R467		03	↓	YD6	P1B-23
↓ (3)	B3R567		04	Z	YD7	P1B-21
CHKØUT (0)	NU		00		YD8	P2B-03
(1)					YD9	01
(2)					YDA	06
(3)					YDB	15
(4)					YDC	08
(5)					YDD	10
(6)					YDE	↓ 14
↓ (7)					YDF	P2B-12
HIS					YE0	P1B-39
TDPAR (0)				D	YA4	28
FDPAR (0)					YCC	27
TDPAR (1)					YA5	30
FDPAR (1)					YCD	29
TDPAR (2)					YA6	32
FDPAR (2)					YCE	31
TDPAR (3)	↓	↓	↓	↓	YA7	↓ 34
FDPAR (3)	NU	Ø	00	D	YCF	P1B-33

ZIF GRØUND PINS			
P1B-05	P1B-25	P2B-05	P2B-25
P1B-16	P1B-36	P2B-16	P2B-36

NØTES:

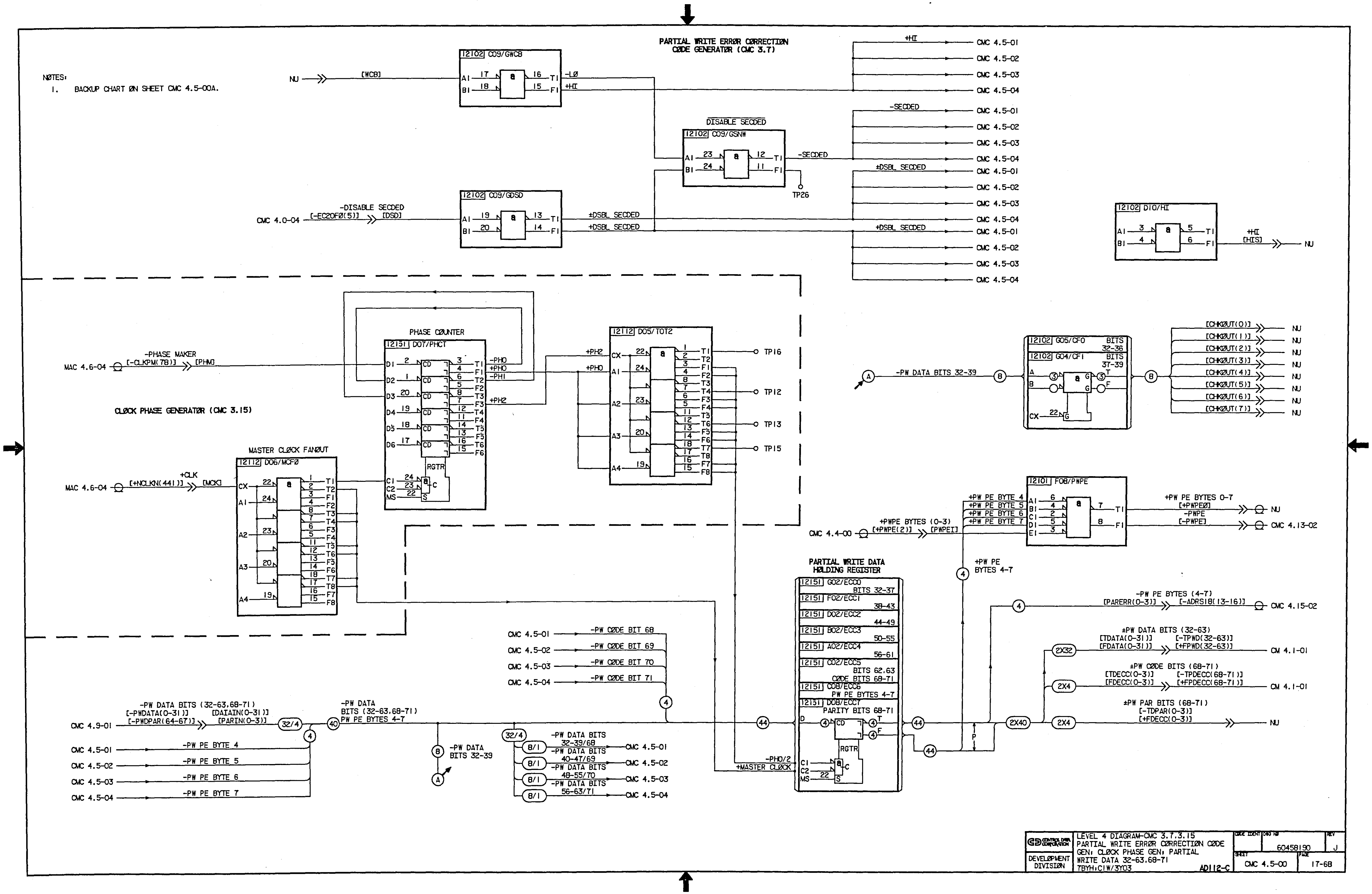
△1 CØNNECTØR TYPES:

C = CØAX
D = DIFFERENTIAL
Z = ZIF TØ FØIL ØN INTERCØNNECT BØARD

CONTROL DATA CORPORATION	LEVEL 4 CØNNECTØR CHART SUPPLEMENTAL WIRING INFØRMATIØN	CODE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	7BYH:C1V/3Y02 AD112-C	SHEET CMC 4.4-CC		PAGE 17-67

NØTES:

1. BACKUP CHART ØN SHEET CMC 4.5-00A.



CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CMC 3.7.3.15
PARTIAL WRITE ERRØR CØRRECTIØN CØDE
GEN; CLØCK PHASE GEN; PARTIAL
WRITE DATA 32-63,68-71
7BYH;C1W/3Y03 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.5-00	17-68

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12151 LOC: G02 NAME: ECC0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G05-17		T	D1	17	DATA	16	T1	P2A-28	
					BIT 32	15	F1	P2A-29	
G05-19		T	D2	18	BIT 33	14	T2	P2A-30	
						13	F2	P2A-31	
G05-23		T	D3	20	BIT 34	8	T3	P2A-34	
						7	F3	P2A-35	
G05-01		T	D4	1	BIT 35	6	T4	P2A-37	
						5	F4	P2A-38	
G05-03		T	D5	2	BIT 36	3	T5	P2A-39	
						4	F5	P2A-40	
G04-17		T	D6	19	BIT 37	12	T6	P2A-32	
						11	F6	P2A-33	
D05-03		T	C1	24	NOTE: C1 FROM TOT2.PIN F1				
D06-07		T	C2	23	C2 FROM MCF0.PIN T4				
			MS	22					

12151 LOC: F02 NAME: ECC1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G04-23		T	D1	1	DATA	6	T1	P2A-21	
					BIT 38	5	F1	P2A-22	
G04-19		T	D2	2	BIT 39	3	T2	P2A-27	
						4	F2	P2A-26	
E14-17		T	D3	20	BIT 40	8	T3	P2A-23	
						7	F3	P2A-24	
E12-17		T	D4	19	BIT 41	12	T4	P2A-19	
						11	F4	P2A-20	
E12-02		T	D5	17	BIT 42	16	T5	P2A-14	
						15	F5	P2A-15	
E12-01		T	D6	18	BIT 43	14	T6	P2A-17	
						13	F6	P2A-18	
D05-04		T	C1	24	NOTE: C1 FROM TOT2.PIN F2				
D06-08		T	C2	23	C2 FROM MCF0.PIN T3				
			MS	22					

12151 LOC: D02 NAME: ECC2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E13-01		T	D1	20	DATA	8	T1	P2A-08	
					BIT 44	7	F1	P2A-09	
E12-19		T	D2	19	BIT 45	12	T2	P2A-06	
						11	F2	P2A-07	
E12-23		T	D3	2	BIT 46	3	T3	P2A-13	
						4	F3	P2A-12	
E12-20		T	D4	1	BIT 47	6	T4	P2A-10	
						5	F4	P2A-11	
B14-17		T	D5	17	BIT 48	16	T5	P2A-01	
						15	F5	P2A-02	
B12-17		T	D6	18	BIT 49	14	T6	P2A-04	
						13	F6	P2A-03	
D05-15		T	C1	24	NOTE: C1 FROM TOT2.PIN F8				
D06-12		T	C2	23	C2 FROM MCF0.PIN T6				
			MS	22					

12151 LOC: B02 NAME: ECC3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B12-02		T	D1	20	DATA	8	T1	P1A-21	
					BIT 50	7	F1	P1A-22	
B12-01		T	D2	1	BIT 51	6	T2	P1A-23	
						5	F2	P1A-24	
B13-01		T	D3	2	BIT 52	3	T3	P1A-27	
						4	F3	P1A-26	
B12-19		T	D4	17	BIT 53	16	T4	P1A-14	
						15	F4	P1A-15	
B12-23		T	D5	19	BIT 54	12	T5	P1A-19	
						11	F5	P1A-20	
B12-20		T	D6	18	BIT 55	14	T6	P1A-18	
						13	F6	P1A-17	
D05-14		T	C1	24	NOTE: C1 FROM TOT2.PIN F6				
D06-17		T	C2	23	C2 FROM MCF0.PIN T8				
			MS	22					

12151 LOC: A02 NAME: ECC4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A14-17		T	D1	17	DATA	16	T1	P1A-01	
					BIT 56	15	F1	P1A-02	
A12-17		T	D2	18	BIT 57	14	T2	P1A-03	
						13	F2	P1A-04	
A12-02		T	D3	19	BIT 58	12	T3	P1A-06	
						11	F3	P1A-07	
A12-01		T	D4	2	BIT 59	3	T4	P1A-13	
						4	F4	P1A-12	
A13-01		T	D5	1	BIT 60	6	T5	P1A-10	
						5	F5	P1A-11	
A12-19		T	D6	20	BIT 61	8	T6	P1A-09	
						7	F6	P1A-08	
D05-13		T	C1	24	NOTE: C1 FROM TOT2.PIN F5				
D06-18		T	C2	23	C2 FROM MCF0.PIN T7				
			MS	22					

12151 LOC: C02 NAME: ECC5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A12-23		T	D1	17	DATA	16	T1	P1A-28	
					BIT 62	15	F1	P1A-29	
A12-20		T	D2	18	BIT 63	14	T2	P1A-31	
						13	F2	P1A-30	
F08-12		T	D3	1	CODE	6	T3	P1A-37	
					BIT 68	5	F3	P1A-38	
E08-12		T	D4	2	CODE	3	T4	P1A-40	
					BIT 69	4	F4	P1A-39	
B08-12		T	D5	19	CODE	12	T5	P1A-32	
					BIT 70	11	F5	P1A-33	
A08-12		T	D6	20	CODE	8	T6	P1A-35	
					BIT 71	7	F6	P1A-34	
D05-05		T	C1	24	NOTE: C1 FROM TOT2.PIN F4				
D06-11		T	C2	23	C2 FROM MCF0.PIN T5				
			MS	22					

12151 LOC: C08 NAME: ECC6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D10-12		T	D1	20	PW PE	8	T1	P1C-98	
					BYTE 4	7	F1	F08-06	
D10-13		T	D2	19	PW PE	12	T2	P1C-97	
					BYTE 5	11	F2	F08-04	
C10-13		T	D3	17	PW PE	16	T3	P1C-106	
					BYTE 6	15	F3	F08-02	
C10-12		T	D4	18	PW PE	14	T4	P1C-105	
					BYTE 7	13	F4	F08-05	
			D5	1		6	T5		
						5	F5		
			D6	2		3	T6		
						4	F6		
D05-16		T	C1	24	NOTE: C1 FROM TOT2.PIN F7				
D06-02	D08-23		C2	23	C2 FROM MCF0.PIN T2				
			MS	22					

12151 LOC: D08 NAME: ECC7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F08-16		T	D1	1	PARITY	6	T1	P1B-28	
					BIT 68	5	F1	P1B-27	
E08-16		T	D2	2	PARITY	3	T2	P1B-30	
					BIT 69	4	F2	P1B-29	
B08-16		T	D3	18	PARITY	14	T3	P1B-32	
					BIT 70	13	F3	P1B-31	
A08-16		T	D4	17	PARITY	16	T4	P1B-34	
					BIT 71	15	F4	P1B-33	
			D5	19		12	T5		
						11	F5		
			D6	20		8	T6		
						7	F6		
D05-06		T	C1	24	NOTE: C1 FROM TOT2.PIN F3				
C08-23		T	C2	23	C2 FROM MCF0.PIN T2				
			MS	22					

12102 LOC: G05 NAME: CF0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F14-17	G02-17		A1	17	PW CHECK	16	T1	P2B-3	
			B1	18	BIT 32	15	F1	TERM	
F12-17	G02-18		A2	19	PW CHECK	13	T2	P2B-1	
			B2	20	BIT 33	14	F2	TERM	
F12-02	G02-20		A3	23	PW CHECK	12	T3	P2B-6	
			B3	24	BIT 34	11	F3	TERM	
F12-01	G02-1		A4	1	PW CHECK	8	T4	P2B-15	
			B4	2	BIT 35	7	F4	TERM	
F13-01	G02-2		A5	3	PW CHECK	5	T5	P2B-8	
			B5	4	BIT 36	6	F5	TERM	
			CX	22					

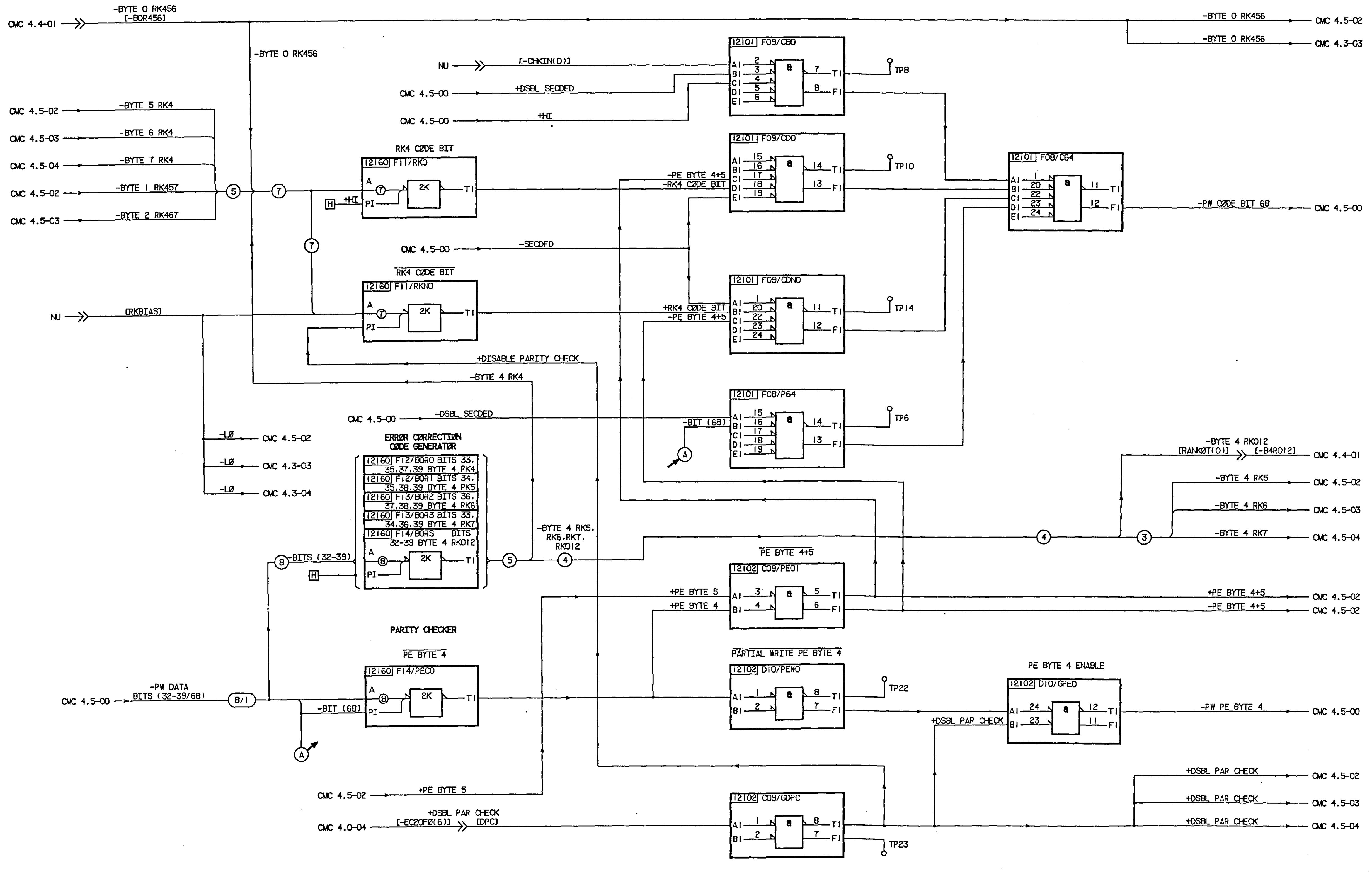
12102 LOC: G04 NAME: CF1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F12-19	G02-19		A1	17	PW CHECK	16	T1	P2B-10	
			B1	18	BIT 37	15	F1	TERM	
F12-23	F02-1		A2	23	PW CHECK	12	T2	P2B-14	
			B2	24	BIT 38	11	F2	TERM	
F12-20	F02-2		A3	19	PW CHECK	13	T3	P2B-12	
			B3	20	BIT 39	14	F3	TERM	
			A4	1		8	T4		
			B4	2		7	F4		
			A5	3		5	T5		
			B5	4		6	F5		
			CX	22					

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.5-00
7BYH; C1W/3Y03 AD112-C

CODE IDENT		DWG NO	REV
34010	D	60458190	J
		SHEET CMC 4.5-00A	17-69



NOTES:

1. BACKUP CHART ON SHEET CMC 4.5-01A.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.7 PARTIAL WRITE ERROR CORRECTION CODE GENERATOR BYTE 4	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION	7BYH:C1W/3Y03 AD112-C	SHEET CMC 4.5-01		PAGE 17-70

REVISION RECORD

REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12160 LOC: F11 NAME: RKO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F12-11	F11-22		A1	20	BYTE 4 RK 4	11	T1	F09-18	
F11-24		T	A2	18	BYTE 5 RK 4				
B12-11	F11-5		A3	13	BYTE 6 RK 4				
A12-11	F11-4		A4	14	BYTE 7 RK 4				
F11-02	E11-5		A5	16	BYTE 0 RK456				
F11-01	E11-4		A6	17	BYTE 1 RK457				
F11-23		T	A7	19	BYTE 2 RK467				
			A8	15					
TIE-HI			P1	12	+HI				

12160 LOC: F11 NAME: RKNO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F11-20		T	A1	22	BYTE 4 RK 4	7	T1	F09-20	
E12-11	F11-18		A2	24	BYTE 5 RK 4				
F11-13		T	A3	5	BYTE 6 RK 4				
F11-14		T	A4	4	BYTE 7 RK 4				
P2B-38	F11-16		A5	2	BYTE 0 RK456				
P2B-40	F11-17		A6	1	BYTE 1 RK457				
B11-01	F11-19		A7	23	BYTE 2 RK467				
E11-03		T	A8	3	+HI				
D10-20	E11-6		P1	6	-LØ				

12160 LOC: F12 NAME: BORO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-15	G05-19		A1	17	BIT 33	11	T1	F11-20	
F14-14	F12-1		A2	18	BIT 35				
F13-24	G04-17		A3	19	BIT 37				
F12-22	G04-19		A4	20	BIT 39				
			A5						
			A6						
			A7						
			A8						
F13-12	F11-12		P1	12	+HI				

12160 LOC: F12 NAME: BOR1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-17	G05-23		A1	2	BIT 34	7	T1	E11-01	
F12-18	G05-1		A2	1	BIT 35				
F13-23	G04-23		A3	23	BIT 38				
F13-20	F12-20		A4	22	BIT 39				
			A5						
			A6						
			A7						
			A8						
TIE-HI			P1	6	+HI				

12160 LOC: F13 NAME: BOR2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-18	G05-3		A1	1	BIT 36	7	T1	B11-22	
F14-18	F12-19		A2	24	BIT 37				
F14-19	F12-23		A3	23	BIT 38				
F14-20	F13-20		A4	22	BIT 39				
			A5						
			A6						
			A7						
			A8						
F14-06	F12-06		P1	6	+HI				

12160 LOC: F13 NAME: BOR3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F14-16	F12-17		A1	15	BIT 33	11	T1	A11-1	
F14-15	F12-2		A2	17	BIT 34				
F14-13	F13-01		A3	18	BIT 36				
F13-22	F12-22		A4	20	BIT 39				
			A5						
			A6						
			A7						
			A8						
TIE-HI	F12-12		P1	12	+HI				

12160 LOC: F14 NAME: BORS

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P2B-35	F14-17		A1	1	BIT 32	7	T1	P2B-37	
P2B-34	F14-16		A2	2	BIT 33				
P2B-33	F14-15		A3	3	BIT 34				
P2B-32	F14-14		A4	4	BIT 35				
P2B-31	F14-13		A5	5	BIT 36				
P2B-30	F14-18		A6	24	BIT 37				
P2B-29	F14-19		A7	23	BIT 38				
P2B-28	F14-20		A8	22	BIT 39				
TIE-HI	F13-06		P1	6	+HI				

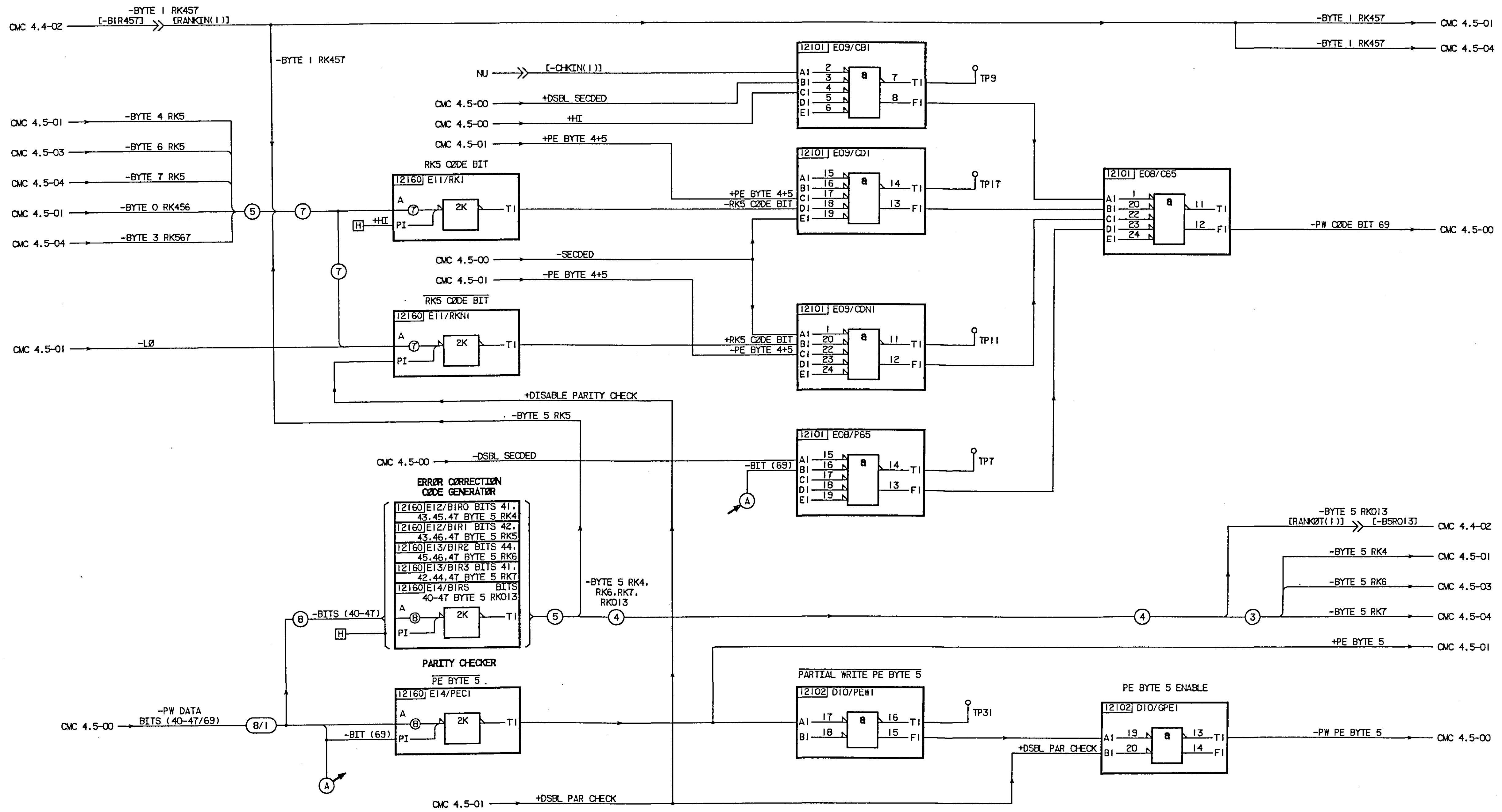
12160 LOC: F14 NAME: PECO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F14-01	G05-17		A1	17	BIT 32	11	T1	D10-1	
F14-02	F13-15		A2	16	BIT 33				
F14-03	F13-17		A3	15	BIT 34				
F14-04	F12-18		A4	14	BIT 35				
F14-05	F13-18		A5	13	BIT 36				
F14-24	F13-24		A6	18	BIT 37				
F14-23	F13-23		A7	19	BIT 38				
F14-22	F13-22		A8	20	BIT 39	BIT 68 IS			
P2B-27	F08-16		P1	12	BIT 68	BYTE 4 PARITY			

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.5-01
7BYH; C1W/3Y03 AD112 - C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.5-01A
17-71



NOTES:

1. BACKUP CHART ON SHEET CMC 4.5-02A.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.7 PARTIAL WRITE ERROR CORRECTION CODE GENERATOR BYTE 5 7BYH;C1W/3Y03	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION	AD112-C	SHEET CMC 4.5-02	PAGE 17-72	

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12160 LOC: E11 NAME: RK1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E11-1		T	A1	17	BYTE 4 RK 5	11	T1	E09-18	
E11-24		T	A2	18	BYTE 5 RK 5				
B12-7	E11-23		A3	19	BYTE 6 RK 5				
A12-7	E11-22		A4	20	BYTE 7 RK 5				
E11-5	B11-05		A5	13	BYTE 0 RK456				
E11-4	A11-05		A6	14	BYTE 1 RK457				
B11-4	E11-02		A7	16	BYTE 3 RK567				
			A8	15					
TIE-HI			P1	12	+HI				

12160 LOC: E11 NAME: RKN1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F12-07	E11-17		A1	1	BYTE 4 RK 5	7	T1	E09-20	
E12-07	E11-18		A2	24	BYTE 5 RK 5				
E11-19		T	A3	23	BYTE 6 RK 5				
E11-20		T	A4	22	BYTE 7 RK 5				
F11-16	E11-13		A5	5	BYTE 0 RK456				
F11-17	E11-14		A6	4	BYTE 1 RK457				
E11-16		T	A7	2	BYTE 3 RK567				
B11-03	F11-3		A8	3	+HI				
F11-06	C10-24		P1	6	-L0				

12160 LOC: E12 NAME: BIR0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E13-15	F02-19		A1	17	BIT 41	11	T1	F11-24	
E14-14	E12-01		A2	18	BIT 43				
E13-24	D02-19		A3	19	BIT 45				
E12-22	D02-01		A4	20	BIT 47				
			A5						
			A6						
			A7						
			A8						
TIE-HI	E13-12		P1	12	+HI				

12160 LOC: E12 NAME: BIR1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E13-17	F02-17		A1	2	BIT 42	7	T1	E11-24	
E12-18	F02-18		A2	1	BIT 43				
E13-23	D02-02		A3	23	BIT 46				
E13-20	E12-20		A4	22	BIT 47				
			A5						
			A6						
			A7						
			A8						
TIE-HI	E13-06		P1	6	+HI				

12160 LOC: E13 NAME: BIR2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E13-18	D02-20		A1	1	BIT 44	7	T1	B11-23	
E14-18	E12-19		A2	24	BIT 45				
E14-19	E12-23		A3	23	BIT 46				
E14-20	E13-20		A4	22	BIT 47				
			A5						
			A6						
			A7						
			A8						
E12-06	E14-06		P1	6	+HI				

12160 LOC: E13 NAME: BIR3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E14-16	E12-17		A1	15	BIT 41	11	T1	A11-24	
E14-15	E12-02		A2	17	BIT 42				
E14-13	E13-01		A3	18	BIT 44				
E13-22	E12-22		A4	20	BIT 47				
			A5						
			A6						
			A7						
			A8						
E12-12			P1	12	+HI				

12160 LOC: E14 NAME: BIRS

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P2B-26	E14-17		A1	1	BIT 40	7	T1	P2B-39	
P2B-24	E14-16		A2	2	BIT 41				
P2B-23	E14-15		A3	3	BIT 42				
P2B-22	E14-14		A4	4	BIT 43				
P2B-21	E14-13		A5	5	BIT 44				
P2B-20	E14-18		A6	24	BIT 45				
P2B-19	E14-19		A7	23	BIT 46				
P2B-18	E14-20		A8	22	BIT 47				
E13-06			P1	6	+HI				

12160 LOC: E14 NAME: PEC1

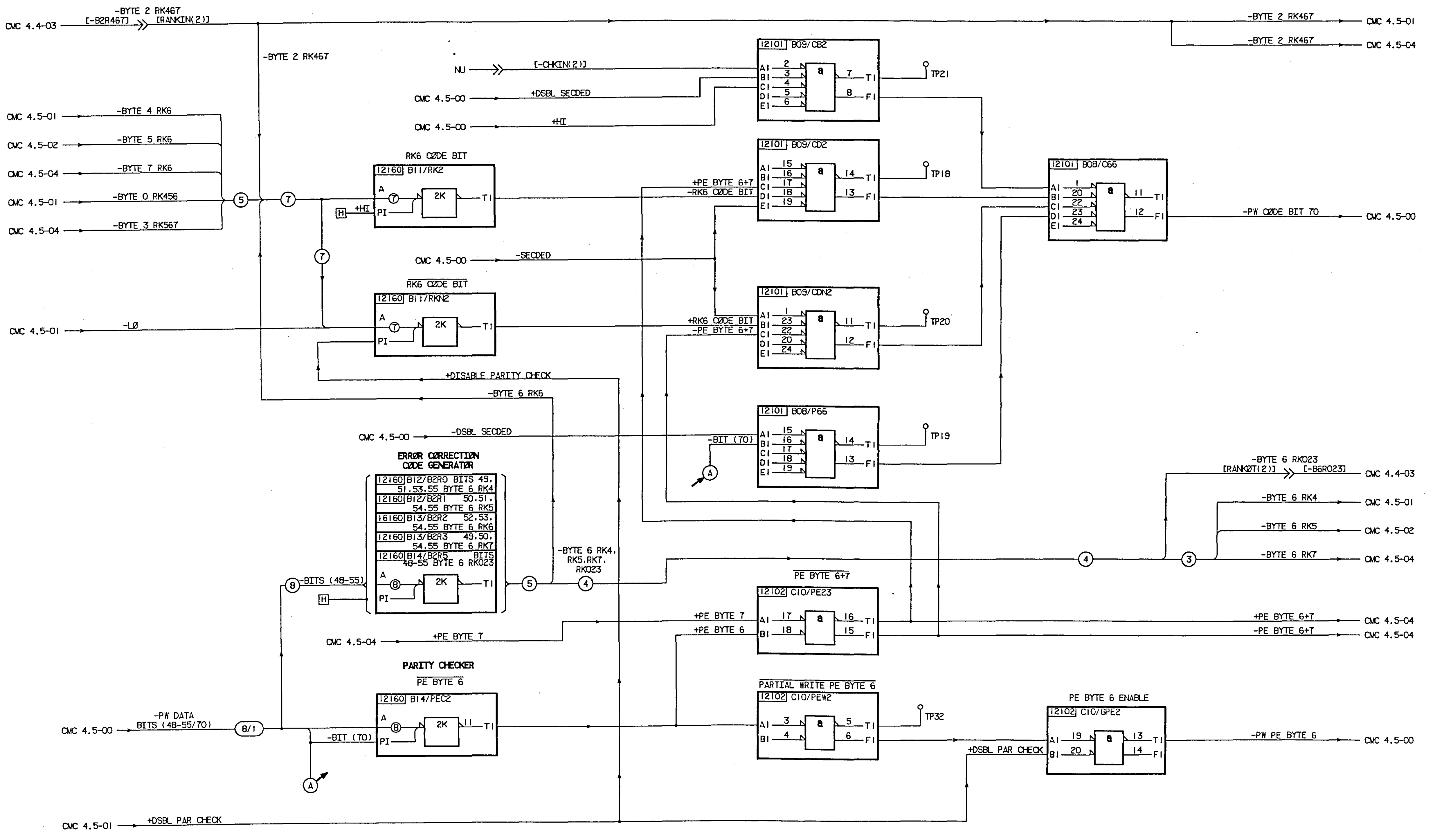
SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E14-01	F2-20		A1	17	BIT 40	11	T1	D10-17	
E14-02	E13-15		A2	16	BIT 41				
E14-03	E13-17		A3	15	BIT 42				
E14-04	E12-18		A4	14	BIT 43				
E14-05	E13-18		A5	13	BIT 44				
E14-24	E13-24		A6	18	BIT 45				
E14-23	E13-23		A7	19	BIT 46				
E14-22	E13-22		A8	20	BIT 47				
P2B-17	E08-16		P1	12	BIT 69				

BIT 69 IS
BYTE 5 PARITY

ARDEN HILLS
OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.5-02
7BYH; C1W/3Y03 AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.5-02A
17-73



NØTES:

1. BACKUP CHART ØN SHEET CMC 4.5-03A.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM - CMC 3.7 PARTIAL WRITE ERRØR CØRRECTIØN CØDE GENERATØR BYTE 6. 7BYH;C1W/3Y03	CODE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	AD112-C	SHEET CMC 4.5-03	PAGE 17-74	

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12160 LOC: B11 NAME: RK2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B11-22		T	A1	20	BYTE 4 RK 6	11	T1	B09-18	
B11-23		T	A2	19	BYTE 5 RK 6				
B11-24		T	A3	18	BYTE 6 RK 6				
A13-07	B11-02		A4	16	BYTE 7 RK 6				
B11-05		T	A5	13	BYTE 0 RK456				
A11-02	B11-01		A6	17	BYTE 2 RK467				
A11-04	B11-04		A7	14	BYTE 3 RK567				
			A8	15					
TIE-HI			P1	12	+HI				

12160 LOC: B13 NAME: B2R3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B14-16	B12-17		A1	15	BIT 49	11	T1	A11-23	
B14-15	B12-02		A2	17	BIT 50				
B14-13	B13-01		A3	18	BIT 52				
B13-22	B12-22		A4	20	BIT 55				
			A5						
			A6						
			A7						
			A8						
TIE-HI			P1	12	+HI				

12160 LOC: B11 NAME: RKN2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-07	B11-20		A1	22	BYTE 4 RK 6	7	T1	B09-23	
E13-07	B11-19		A2	23	BYTE 5 RK 6				
B13-07	B11-18		A3	24	BYTE 6 RK 6				
B11-16		T	A4	2	BYTE 7 RK 6				
E11-13	B11-13		A5	5	BYTE 0 RK456				
B11-17	F11-23		A6	1	BYTE 2 RK467				
B11-14	E11-16		A7	4	BYTE 3 RK567				
A11-03	E11-03		A8	3	+HI				
C10-20	A11-06		P1	6	-L0				

12160 LOC: B14 NAME: B2RS

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P1B-20	B14-17		A1	1	BIT 48	7	T1	P1B-23	
P1B-19	B14-16		A2	2	BIT 49				
P1B-18	B14-15		A3	3	BIT 50				
P1B-17	B14-14		A4	4	BIT 51				
P1B-15	B14-13		A5	5	BIT 52				
B14-18	B13-24		A6	24	BIT 53				
B14-19	B13-23		A7	23	BIT 54				
B14-20	B13-22		A8	22	BIT 55				
B13-06			P1	6	+HI				

12160 LOC: B12 NAME: B2R0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B13-15	D02-18		A1	17	BIT 49	11	T1	F11-13	
B14-14	B12-01		A2	18	BIT 51				
B13-24	B02-17		A3	19	BIT 53				
B12-22	B02-18		A4	20	BIT 55				
			A5						
			A6						
			A7						
			A8						
TIE-HI	B12-06		P1	12	+HI				

12160 LOC: B14 NAME: PEC2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B14-01	D02-17		A1	17	BIT 48	11	T1	C10-18	
B14-02	B13-15		A2	16	BIT 49				
B14-03	B13-17		A3	15	BIT 50				
B14-04	B12-18		A4	14	BIT 51				
B14-05	B13-18		A5	13	BIT 52				
P1B-14	B14-24		A6	18	BIT 53				
P1B-13	B14-23		A7	19	BIT 54				
P1B-12	B14-22		A8	20	BIT 55	BIT 70 IS			
P1B-11	B08-16		P1	12	BIT 70	BYTE 6 PARITY			

12160 LOC: B12 NAME: B2R1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B13-17	B02-20		A1	2	BIT 50	7	T1	E11-19	
B12-18	B02-01		A2	1	BIT 51				
B13-23	B02-19		A3	23	BIT 54				
B13-20	B12-20		A4	22	BIT 55				
			A5						
			A6						
			A7						
			A8						
B12-12	B13-06		P1	6	+HI				

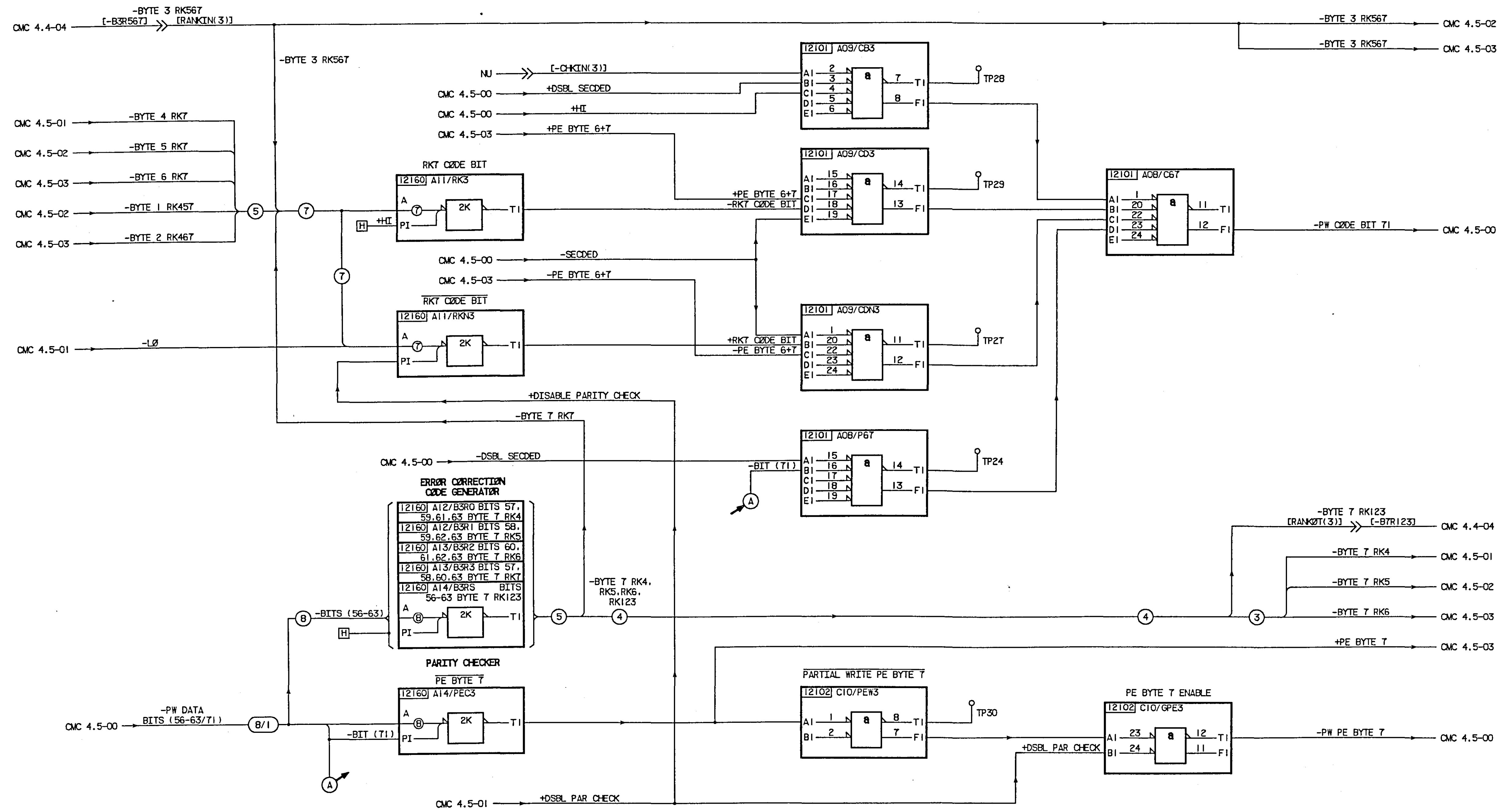
12160 LOC: B13 NAME: B2R2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B13-18	B02-02		A1	1	BIT 52	7	T1	B11-24	
B14-24	B12-19		A2	24	BIT 53				
B14-23	B12-23		A3	23	BIT 54				
B14-22	B13-20		A4	22	BIT 55				
			A5						
			A6						
			A7						
			A8						
B12-06	B14-06		P1	6	+HI				

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.5-03
7BYH; C1W/3Y00 AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.5-03A
17-75



NOTES:

1. BACKUP CHART ON SHEET CMC 4.5-04A.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.7
PARTIAL WRITE ERROR CORRECTION
CODE GENERATOR BYTE 7
7BYH:C1W/3Y03

AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.5-04	17-76

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12160 LOC: A11 NAME: RK3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A11-01		T	A1	17	BYTE 4 RK 7	11	T1	A09-18	
A11-24		T	A2	18	BYTE 5 RK 7				
A11-23		T	A3	19	BYTE 6 RK 7				
A11-20		T	A4	20	BYTE 7 RK 7				
A11-05		T	A5	13	BYTE 1 RK457				
P1B-24	A11-2		A6	16	BYTE 2 RK467				
P1B-22	A11-4		A7	14	BYTE 3 RK567				
			A8	15					
TIE-HI			P1	12	+HI				

12160 LOC: A13 NAME: B3R3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A14-16	A12-17		A1	15	BIT 57	11	T1	A11-20	
A14-15	A12-02		A2	17	BIT 58				
A14-13	A13-01		A3	18	BIT 60				
A13-22	A12-22		A4	20	BIT 63				
			A5						
			A6						
			A7						
			A8						
TIE-HI	A12-12		P1	12	+HI				

12160 LOC: A11 NAME: RKN3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-11	A11-17		A1	1	BYTE 4 RK 7	7	T1	A09-20	
E13-11	A11-18		A2	24	BYTE 5 RK 7				
B13-11	A11-19		A3	23	BYTE 6 RK 7				
A13-11	A11-22		A4	22	BYTE 7 RK 7				
E11-14	A11-13		A5	5	BYTE 1 RK457				
A11-16	B11-17		A6	2	BYTE 2 RK467				
A11-14	B11-14		A7	4	BYTE 3 RK567				
P1B-38	B11-03		A8	3	+HI				
B11-06		T	P1	6	-L0				

12160 LOC: A14 NAME: B3R5

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P1B-10	A14-17		A1	1	BIT 56	7	T1	P1B-21	
P1B-09	A14-16		A2	2	BIT 57				
P1B-08	A14-15		A3	3	BIT 58				
P1B-07	A14-14		A4	4	BIT 59				
P1B-06	A14-13		A5	5	BIT 60				
A14-18	A13-24		A6	24	BIT 61				
A14-19	A13-23		A7	23	BIT 62				
P1B-02	A14-20		A8	22	BIT 63				
A13-06			P1	6	+HI				

12160 LOC: A12 NAME: B3R0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A13-15	A02-18		A1	17	BIT 57	11	T1	F11-14	
A14-14	A12-01		A2	18	BIT 59				
A13-24	A02-20		A3	19	BIT 61				
A12-22	C02-18		A4	20	BIT 63				
			A5						
			A6						
			A7						
			A8						
A13-12	A12-06		P1	12	+HI				

12160 LOC: A14 NAME: PEC3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A14-01	A02-17		A1	17	BIT 56	11	T1	C10-17	
A14-02	A13-15		A2	16	BIT 57				
A14-03	A13-17		A3	15	BIT 58				
A14-04	A12-18		A4	14	BIT 59				
A14-05	A13-18		A5	13	BIT 60				
P1B-04	A14-24		A6	18	BIT 61				
P1B-03	A14-23		A7	19	BIT 62				
A14-22	A13-22		A8	20	BIT 63				
P1B-01	A08-16		P1	12	BIT 71				

BIT 71 IS BYTE 7 PARITY

12160 LOC: A12 NAME: B3R1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A13-17	A02-19		A1	2	BIT 58	7	T1	E11-20	
A12-18	A02-02		A2	1	BIT 59				
A13-23	C02-17		A3	23	BIT 62				
A13-20	A12-20		A4	22	BIT 63				
			A5						
			A6						
			A7						
			A8						
A12-12	A13-06		P1	6	+HI				

12160 LOC: A13 NAME: B3R2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A13-18	A02-01		A1	1	BIT 60	7	T1	B11-16	
A14-24	A12-19		A2	24	BIT 61				
A14-23	A12-23		A3	23	BIT 62				
A14-20	A13-20		A4	22	BIT 63				
			A5						
			A6						
			A7						
			A8						
A12-	A14-		P1	6	+HI				

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.5-04
7BYH; C1W/3Y03 AD112-C

CODE IDENT 34010	D	DWG NO 60458190	REV J
		SHEET CMC 4.5-04A	17-77

LEFT ZIF ⚠1

BIT NAME		I/Ø	SHEET CMC 4.5-	TYPE	VIRTUAL PIN	REAL PIN
TDATA (0)	TPWD (32)	Ø	00	D	Y80	P2A-28
FDATA (0)	FPWD (32)				YA8	29
(1)	(33)				Y81	30
(1)	(33)				YA9	31
(2)	(34)				Y82	34
(2)	(34)				YAA	35
(3)	(35)				Y83	37
(3)	(35)				YAB	38
(4)	(36)				Y84	39
(4)	(36)				YAC	40
(5)	(37)				Y85	32
(5)	(37)				YAD	33
(6)	(38)				Y86	21
(6)	(38)				YAE	22
(7)	(39)				Y87	27
(7)	(39)				YAF	26
(8)	(40)				Y88	23
(8)	(40)				YB0	24
(9)	(41)				Y89	19
(9)	(41)				YB1	20
(10)	(42)				Y8A	14
(10)	(42)				YB2	15
(11)	(43)				Y8B	17
(11)	(43)				YB3	18
(12)	(44)				Y8C	08
(12)	(44)				YB4	09
(13)	(45)				Y8D	06
(13)	(45)				YB5	07
(14)	(46)				Y8E	13
(14)	(46)				YB6	12
(15)	(47)				Y8F	10
(15)	(47)				YB7	11
(16)	(48)				Y90	01
(16)	(48)				YB8	02
(17)	(49)				Y91	04
(17)	(49)				YB9	P2A-03
(18)	(50)				Y92	P1A-21
(18)	(50)				YBA	22
(19)	(51)				Y93	23
(19)	(51)				YBB	24
(20)	(52)				Y94	27
(20)	(52)				YBC	26
(21)	(53)				Y95	14
(21)	(53)				YBD	15
(22)	(54)				Y96	19
(22)	(54)				YBE	20
(23)	(55)				Y97	18
(23)	(55)				YBF	17
(24)	(56)				Y98	01
(24)	(56)				YC0	02
(25)	(57)				Y99	03
(25)	(57)				YC1	04
(26)	(58)				Y9A	06
(26)	(58)				YC2	07
(27)	(59)				Y9B	13
(27)	(59)				YC3	12
(28)	(60)				Y9C	10
(28)	(60)				YC4	11
(29)	(61)				Y9D	09
(29)	(61)				YC5	08
(30)	(62)				Y9E	28
(30)	(62)				YC6	29
TDATA (31)	TPWD (63)				Y9F	31
FDATA (31)	FPWD (63)				YC7	30
TDECC (0)	TPDECC (68)				YA0	37
FDECC (0)	FPDECC (68)				YC8	38
(1)	(69)				YA1	40
(1)	(69)				YC9	39
(2)	(70)				YA2	32
(2)	(70)				YCA	33
TDECC (3)	TPDECC (71)				YA3	35
FDECC (3)	FPDECC (71)	Ø	00	D	YCB	P1A-34

ZIF GRØUND PINS			
P1A-05	P1A-25	P2A-05	P2A-25
P1A-16	P1A-36	P2A-16	P2A-36

CØAX ⚠1

BIT NAME		I/Ø	SHEET CMC 4.5-	TYPE	VIRTUAL PIN	REAL PIN
MCK	NCLKN (441)	I	00	C	Y24	P1C-80
PHM	CLKPM (78)	I			Y25	92
PARERR (0)	ADRS18 (13)	Ø			YD0	98
(1)	(14)				YD1	97
(2)	(15)				YD2	106
(3)	(16)			C	YD3	105
PWPEØ	NU				YE1	83
PWPE	PWPE (0)	Ø		C	YE2	79
PWPEI	PWPEØ (0)	I	00	C	Y32	P1C-110

RIGHT ZIF ⚠1

BIT NAME		I/Ø	SHEET CMC 4.5-	TYPE	VIRTUAL PIN	REAL PIN
DATAIN (0)	PWDATA (0)	I	00	Z	Y00	P2B-35
(1)	(1)				Y01	34
(2)	(2)				Y02	33
(3)	(3)				Y03	32
(4)	(4)				Y04	31
(5)	(5)				Y05	30
(6)	(6)				Y06	29
(7)	(7)				Y07	28
(8)	(8)				Y08	26
(9)	(9)				Y09	24
(10)	(10)				Y0A	23
(11)	(11)				Y0B	22
(12)	(12)				Y0C	21
(13)	(13)				Y0D	20
(14)	(14)				Y0E	19
(15)	(15)				Y0F	P2B-18
(16)	(16)				Y10	P1B-20
(17)	(17)				Y11	19
(18)	(18)				Y12	18
(19)	(19)				Y13	17
(20)	(20)				Y14	15
(21)	(21)				Y15	14
(22)	(22)				Y16	13
(23)	(23)				Y17	12
(24)	(24)				Y18	10
(25)	(25)				Y19	09
(26)	(26)				Y1A	08
(27)	(27)				Y1B	07
(28)	(28)				Y1C	06
(29)	(29)				Y1D	04
(30)	(30)				Y1E	03
DATAIN (31)	PWDATA (31)				Y1F	P1B-02
PARIN (0)	PWDPAR (64)				Y20	P2B-27
(1)	(65)				Y21	P2B-17
(2)	(66)				Y22	P1B-11
(3)	(67)		00		Y23	P1B-01
RANKIN (0)	B0R456		01		Y29	P2B-38
(1)	B1R457		02		Y2A	P2B-40
(2)	B2R467		03		Y2B	P1B-24
(3)	B3R567		04	Z	Y2C	P1B-22
CHKIN (0)	NU		01		Y2D	P2B-07
(1)			02		Y2E	P2B-09
(2)			03		Y2F	P2B-11
(3)			04		Y30	P2B-13
DSD	EC20FØ (5)		00	C	Y27	P1B-35
RKBAIS	NU		01		Y31	P1B-38
WCB	NU		01		Y26	P1B-40
DPC	EC20FØ (6)	I	00	C	Y28	P1B-37
RANKØT (0)	B4R012	Ø	01	Z	YD4	P2B-37
(1)	B5R013		02		YD5	P2B-39
(2)	B6R023		03		YD6	P1B-23
(3)	B7R123		04	Z	YD7	P1B-21
CHKØUT (0)	NU		00		YD8	P2B-03
(1)					YD9	01
(2)					YDA	06
(3)					YDB	15
(4)					YDC	08
(5)					YDD	10
(6)					YDE	14
(7)					YDF	P2B-12
HIS					YE0	P1B-39
TDPAR (0)				D	YA4	28
FDPAR (0)					YCC	27
TDPAR (1)					YA5	30
FDPAR (1)					YCD	29
TDPAR (2)					YA6	32
FDPAR (2)					YCE	31
TDPAR (3)					YA7	34
FDPAR (3)	NU	Ø	00	D	YCF	P1B-33

ZIF GRØUND PINS			
P1B-05	P1B-25	P2B-05	P2B-25
P1B-16	P1B-36	P2B-16	P2B-36

NØTES:

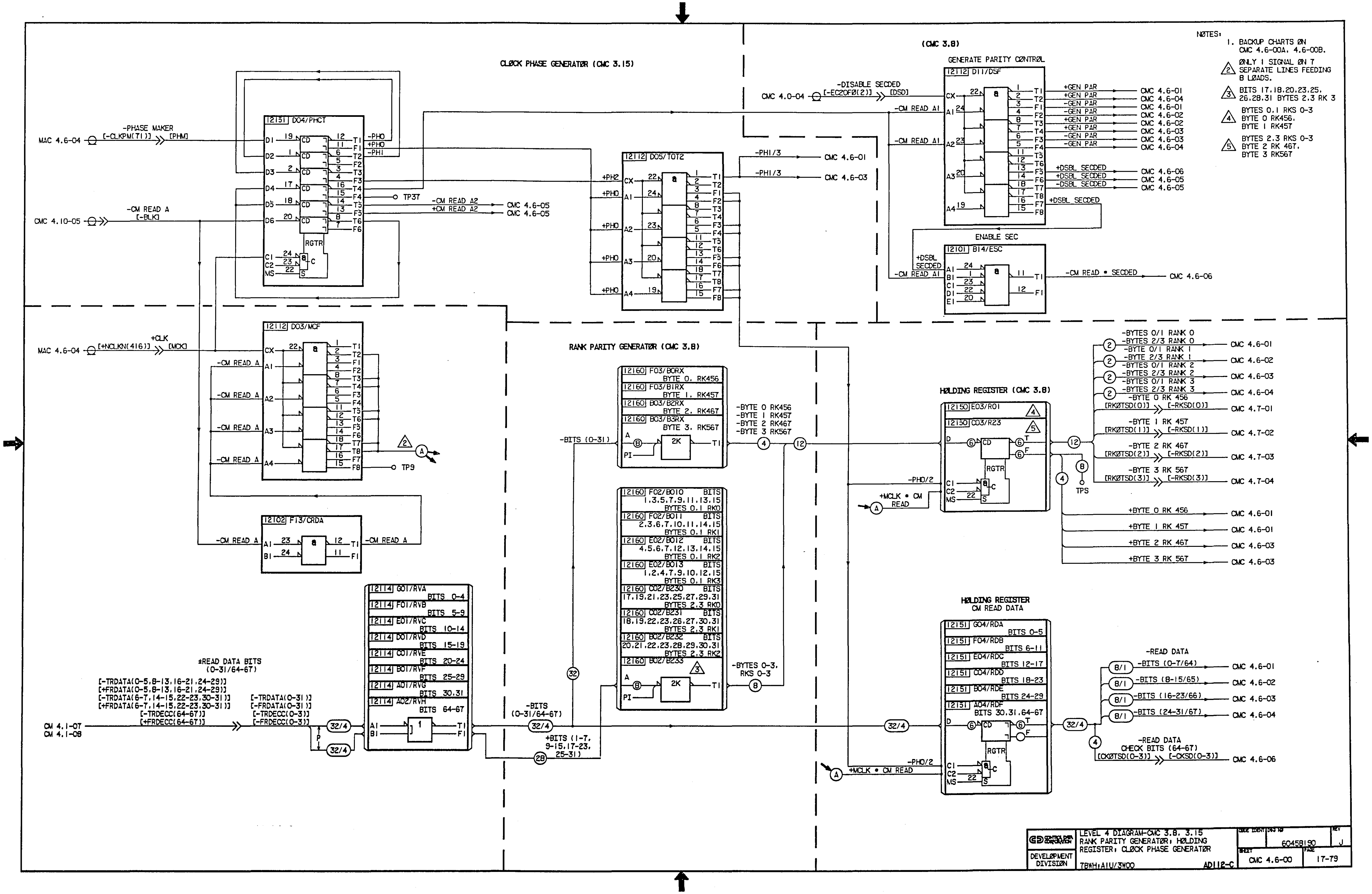
⚠1 CØNNECTØR TYPES:

C = CØAX
D = DIFFERENTIAL
Z = ZIF TØ FØIL ØN INTERCØNNECT BØARD

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 CØNNECTØR CHART
SUPPLEMENTAL WIRING INFØRMATIØN
7BYH;C1W/3Y03
AD112-C

CODE IDENT | DWG NO 60458190 | REV J
SHEET CMC 4.5-CC | PAGE 17-78


CLØCK PHASE GENERATØR (CMC 3.15)
12131 D04/PHCT
MAC 4.6-04 -PHASE MAKER [-CLKPM(71)] [PHM]
CMC 4.10-05 -CM READ A [-BLK]
-PH0
+PH0
-PH1
TP37
-CM READ A2 CMC 4.6-05
+CM READ A2 CMC 4.6-05
RGTR
12112 D05/TOT2
+PH2
+PH0
-PH1/3 CMC 4.6-01
-PH1/3 CMC 4.6-03
(CMC 3.8)
GENERATE PARITY CØNTRØL
12112 D11/DSF
CMC 4.0-04 -DISABLE SECDED [-EC20F0(2)] [DSD]
-CM READ A1
+GEN PAR CMC 4.6-01
+GEN PAR CMC 4.6-04
-GEN PAR CMC 4.6-01
-GEN PAR CMC 4.6-02
+GEN PAR CMC 4.6-02
+GEN PAR CMC 4.6-03
-GEN PAR CMC 4.6-03
-GEN PAR CMC 4.6-04
+DSBL SECDED CMC 4.6-06
+DSBL SECDED CMC 4.6-05
-DSBL SECDED CMC 4.6-05
+DSBL SECDED
ENABLE SEC
12101 B14/ESC
+DSBL SECDED
-CM READ A1
-CM READ • SECDED CMC 4.6-06
MAC 4.6-04 +CLK [+NCLKN(416)] [MCK]
12112 D03/MCF
-CM READ A
TP9
12102 F13/CRDA
-CM READ A
RANK PARITY GENERATØR (CMC 3.8)
12160 F03/B0RX BYTE 0, RK456
12160 F03/B1RX BYTE 1, RK457
12160 B03/B2RX BYTE 2, RK467
12160 B03/B3RX BYTE 3, RK567
-BITS (0-31)
2K
-BYTE 0 RK456
-BYTE 1 RK457
-BYTE 2 RK467
-BYTE 3 RK567
12160 F02/B010 BITS 1,3,5,7,9,11,13,15 BYTES 0,1 RK0
12160 F02/B011 BITS 2,3,6,7,10,11,14,15 BYTES 0,1 RK1
12160 E02/B012 BITS 4,5,6,7,12,13,14,15 BYTES 0,1 RK2
12160 E02/B013 BITS 1,2,4,7,9,10,12,15 BYTES 0,1 RK3
12160 C02/B230 BITS 17,19,21,23,25,27,29,31 BYTES 2,3 RK0
12160 C02/B231 BITS 18,19,22,23,26,27,30,31 BYTES 2,3 RK1
12160 B02/B232 BITS 20,21,22,23,28,29,30,31 BYTES 2,3 RK2
12160 B02/B233
-BYTES 0-3, RKS 0-3
12114 G01/RVA BITS 0-4
12114 F01/RVB BITS 5-9
12114 E01/RVC BITS 10-14
12114 D01/RVD BITS 15-19
12114 C01/RVE BITS 20-24
12114 B01/RVF BITS 25-29
12114 A01/RVG BITS 30,31
12114 A02/RVH BITS 64-67
±READ DATA BITS (0-31/64-67)
[-TRDATA(0-5,8-13,16-21,24-29)]
[+FRDATA(0-5,8-13,16-21,24-29)]
[-TRDATA(6-7,14-15,22-23,30-31)]
[+FRDATA(6-7,14-15,22-23,30-31)]
[-TRDECC(64-67)]
[+FRDECC(64-67)]
[-TRDATA(0-31)]
[-FRDATA(0-31)]
[-TRDECC(0-3)]
[-FRDECC(0-3)]
CM 4.1-07
CM 4.1-08
-BITS (0-31/64-67)
+BITS (1-7, 9-15,17-23, 25-31)
HØLDING REGISTER (CMC 3.8)
12150 E03/R01
12150 C03/R23
-PH0/2
+MCLK • CM READ
TP5
-BYTES 0/1 RANK 0
-BYTES 2/3 RANK 0 CMC 4.6-01
-BYTE 0/1 RANK 1
-BYTE 2/3 RANK 1 CMC 4.6-02
-BYTES 0/1 RANK 2
-BYTES 2/3 RANK 2 CMC 4.6-03
-BYTES 0/1 RANK 3
-BYTES 2/3 RANK 3 CMC 4.6-04
-BYTE 0 RK 456 [RK0TSD(0)] [-RKSD(0)] CMC 4.7-01
-BYTE 1 RK 457 [RK0TSD(1)] [-RKSD(1)] CMC 4.7-02
-BYTE 2 RK 467 [RK0TSD(2)] [-RKSD(2)] CMC 4.7-03
-BYTE 3 RK 567 [RK0TSD(3)] [-RKSD(3)] CMC 4.7-04
+BYTE 0 RK 456 CMC 4.6-01
+BYTE 1 RK 457 CMC 4.6-01
+BYTE 2 RK 467 CMC 4.6-03
+BYTE 3 RK 567 CMC 4.6-03
HØLDING REGISTER CM READ DATA
12151 G04/RDA BITS 0-5
12151 F04/RDB BITS 6-11
12151 E04/RDC BITS 12-17
12151 C04/RDD BITS 18-23
12151 B04/RDE BITS 24-29
12151 A04/RDF BITS 30,31,64-67
-PH0/2
+MCLK • CM READ
-READ DATA
-BITS (0-7/64) CMC 4.6-01
-BITS (8-15/65) CMC 4.6-02
-BITS (16-23/66) CMC 4.6-03
-BITS (24-31/67) CMC 4.6-04
-READ DATA CHECK BITS (64-67) [CK0TSD(0-3)] [-CKSD(0-3)] CMC 4.6-06
32/4
32
28
12
8/1
4
8
A

NØTES:

1. BACKUP CHARTS ØN CMC 4.6-00A, 4.6-00B.

2. ØNLY 1 SIGNAL ØN 7 SEPARATE LINES FEEDING 8 LØADS.

3. BITS 17,18,20,23,25, 26,28,31 BYTES 2,3 RK 3

4. BYTES 0,1 RKS 0-3 BYTE 0 RK456, BYTE 1 RK457

5. BYTES 2,3 RKS 0-3 BYTE 2 RK 467, BYTE 3 RK567

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN
LEVEL 4 DIAGRAM-CMC 3.8, 3.15
RANK PARITY GENERATØR, HØLDING REGISTER, CLØCK PHASE GENERATØR
78WH,A1U/3W00
AD112-C
CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.6-00
PAGE 17-79

12160 LOC: F03 NAME: B0RX

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G01-07	G04-19		A1	4	BIT 0	7	T1	E03-02	1
G01-05	G04-18		A2	2	BIT 1				
G01-15	G04-01		A3	24	BIT 2				
G01-13	G04-02		A4	23	BIT 3				
G01-11	G04-17		A5	3	BIT 4				
F01-07	G04-20		A6	5	BIT 5				
F01-05	F04-20		A7	22	BIT 6				
F01-15	F04-02		A8	1	BIT 7				
			PI	6					

12160 LOC: F03 NAME: B1RX

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F01-13	F04-17		A1	16	BIT 8	11	T1	E03-17	1
F01-11	F04-01		A2	20	BIT 9				
E01-07	F04-18		A3	13	BIT 10				
E01-05	F04-19		A4	19	BIT 11				
E01-15	E04-20		A5	18	BIT 12				
E01-13	E04-01		A6	17	BIT 13				
E01-11	E04-19		A7	14	BIT 14				
D01-07	E04-02		A8	15	BIT 15				
			PI	12					

12160 LOC: B03 NAME: B2RX

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D01-05	E04-18		A1	23	BIT 16	7	T1	C03-17	1
D01-15	E04-17		A2	3	BIT 17				
D01-13	C04-20		A3	1	BIT 18				
D01-11	C04-19		A4	2	BIT 19				
C01-07	C04-18		A5	4	BIT 20				
C01-05	C04-02		A6	22	BIT 21				
C01-15	C04-17		A7	5	BIT 22				
C01-13	C04-01		A8	24	BIT 23				
			PI	6					

12160 LOC: B03 NAME: B3RX

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C01-11	B04-17		A1	18	BIT 24	11	T1	C03-18	1
B01-07	B04-02		A2	20	BIT 25				
B01-05	B04-01		A3	19	BIT 26				
B01-15	B04-20		A4	14	BIT 27				
B01-13	B04-19		A5	13	BIT 28				
B01-11	B04-18		A6	16	BIT 29				
A01-07	A04-02		A7	17	BIT 30				
A01-05	A04-01		A8	15	BIT 31				
			PI	12					

12150 LOC: E03 NAME: R01

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F02-07		T	D1	18	BYTES 0,1	14	T1	E11-18	1
					RK 0	13	F1	TP-3	1
F02-11		T	D2	1	BYTES 0,1	6	T2	E11-04	1
					RK 1	5	F2	TP-1	1
E02-07		T	D3	20	BYTES 0,1	8	T3	C11-05	1
					RK 2	7	F3	TP-4	1
E02-11		T	D4	19	BYTES 0,1	12	T4	C11-18	1
					RK 3	11	F4	TP-5	1
F03-07		T	D5	2	BYTE 0	3	T5	E06-04	2
					RK456	4	F5	E12-19	1
F03-11		T	D6	17	BYTE 1	16	T6	E06-16	2
					RK457	15	F6	E12-20	1
D05-06		T	C1	24	NOTE: C1 FROM TOT2, PIN F3 C2 FROM MCF, PIN T3				
D03-08	F04-23		C2	23					
			MS	22					

12150 LOC: C03 NAME: R23

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C02-07		T	D1	2	BYTES 2,3	3	T1	E11-17	1
					RK 0	4	F1	TP-12	1
C02-11		T	D2	1	BYTES 2,3	6	T2	E11-05	1
					RK 1	5	F2	TP-10	1
B02-07		T	D3	19	BYTES 2,3	12	T3	C11-04	1
					RK 2	11	F3	TP-7	1
B02-11		T	D4	20	BYTES 2,3	8	T4	C11-17	1
					RK 3	7	F4	TP-6	1
B03-07		T	D5	17	BYTE 2	16	T5	C06-04	1
					RK467	15	F5	C12-19	1
B03-11		T	D6	18	BYTE 3	14	T6	C06-16	1
					RK567	13	F6	C12-20	1
D05-14		T	C1	24	NOTE: C1 FROM TOT2, PIN F6 C2 FROM MCF, PIN T6				
D03-12		T	C2	23					
			MS	22					

12114 LOC: G01 NAME: RVA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-33		T	A1	2	DATA	7	T1	F03-04	2
P2A-32		T	B1	1	BIT 0	8	F1	TERM	
P2A-35		T	A2	4	BIT 1	5	T2	F03-02	2
P2A-34		T	B2	3		6	F2	F02-01	2
P2A-31		T	A3	18	BIT 2	15	T3	F03-24	2
P2A-30		T	B3	17		16	F3	F02-18	2
P2A-38		T	A4	20	BIT 3	13	T4	F03-23	2
P2A-37		T	B4	19		14	F4	F02-02	2
P2A-39		T	A5	24	BIT 4	11	T5	F03-03	2
P2A-40		T	B5	23		12	F5	E02-23	2

12114 LOC: F01 NAME: RVB

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-28		T	A1	2	DATA	7	T1	F03-05	2
P2A-29		T	B1	1	BIT 5	8	F1	F02-24	2
P2A-26		T	A2	4	BIT 6	5	T2	F03-22	2
P2A-27		T	B2	3		6	F2	F02-16	2
P2A-20		T	A3	18	BIT 7	15	T3	F03-01	2
P2A-19		T	B3	17		16	F3	F02-20	4
P2A-22		T	A4	20	BIT 8	13	T4	F03-16	2
P2A-21		T	B4	19		14	F4	TERM	
P2A-24		T	A5	24	BIT 9	11	T5	F03-20	2
P2A-23		T	B5	23		12	F5	F02-23	2

12114 LOC: E01 NAME: RVC

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-17		T	A1	2	DATA	7	T1	F03-13	2
P2A-18		T	B1	1	BIT 10	8	F1	F02-19	2
P2A-14		T	A2	4	BIT 11	5	T2	F03-19	2
P2A-15		T	B2	3		6	F2	F02-13	2
P2A-09		T	A3	18	BIT 12	15	T3	F03-18	2
P2A-08		T	B3	17		16	F3	E02-17	
P2A-11		T	A4	20	BIT 13	13	T4	F03-17	2
P2A-10		T	B4	19		14	F4	E02-05	2
P2A-13		T	A5	24	BIT 14	11	T5	F03-14	2
P2A-12		T	B5	23		12	F5	F02-14	2

12114 LOC: D01 NAME: RVD

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-06		T	A1	2	DATA	7	T1	F03-15	2
P2A-07		T	B1	1	BIT 15	8	F1	E02-15	4
P2A-03		T	A2	4	BIT 16	5	T2	B03-23	2
P2A-04		T	B2	3		6	F2	TERM	
P1A-38		T	A3	18	BIT 17	15	T3	B03-03	2
P1A-37		T	B3	17		16	F3	C02-02	2
P1A-40		T	A4	20	BIT 18	13	T4	B03-01	2
P1A-39		T	B4	19		14	F4	C02-19	2
P2A-2		T	A5	24	BIT 19	11	T5	B03-02	2
P2A-1		T	B5	23		12	F5	C02-01	2

12114 LOC: C01 NAME: RVE

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-34		T	A1	2	DATA	7	T1	B03-04	2
P1A-35		T	B1	1	BIT 20	8	F1	B02-03	2
P1A-32		T	A2	4	BIT 21	5	T2	B03-22	2
P1A-33		T	B2	3		6	F2	C02-04	2
P1A-27		T	A3	18	BIT 22	15	T3	B03-05	2
P1A-26		T	B3	17		16	F3	C02-17	2
P1A-29		T	A4	20	BIT 23	13	T4	B03-24	2
P1A-28		T	B4	19		14	F4	C02-20	4
P1A-31		T	A5	24	BIT 24	11	T5	B03-11	2
P1A-30		T	B5	23		12	F5	TERM	

12114 LOC: B01 NAME: RVF

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-23		T	A1	2	DATA	7	T1	B03-20	2
P1A-24		T	B1	1	BIT 25	8	F1	B02-16	2
P1A-21		T	A2	4	BIT 26	5	T2	B03-19	2
P1A-22		T	B2	3		6	F2	C02-13	2
P1A-15		T	A3	18	BIT 27	15	T3	B03-14	2
P1A-14		T	B3	17		16	F3	C02-16	2
P1A-18		T	A4	20	BIT 28	13	T4	B03-13	2
P1A-17		T	B4	19		14	F4	B02-17	2
P1A-20		T	A5	24	BIT 29	11	T5	B03-16	2
P1A-19		T	B5	23		12	F5	B02-23	2

12114 LOC: A01 NAME: RVG

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-08		T	A1	2	DATA	7	T1	B03-17	2
P1A-09		T	B1	1	BIT 30	8	F1	B02-24	2
P1A-06		T	A2	4	BIT 31	5	T2	B03-15	2
P1A-07		T	B2	3		6	F2	B02-14	4
			A3				T3		
			B3				F3		
			A4				T4		
			B4				F4		
			A5				T5		
			B5				F5		

12114 LOC: A02 NAME: RVH

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-12		T	A1	2	CODE	7	T1	A04-19	1
P1A-13		T	B1	1	BIT 64	8	F1	TERM	
P1A-10		T	A2	4	BIT 65	5	T2	A04-20	1
P1A-11		T	B2	3		6	F2	TERM	
P1A-02		T	A3	18	BIT 66	15	T3	A04-17	1
P1A-01		T	B3	17		16	F3	TERM	
P1A-04		T	A4	20	BIT 67	13	T4	A04-18	1
P1A-03		T	B4	19		14	F4	TERM	
			A5				T5		
			B5				F5		

12160 LOC: F02 NAME: B010

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G01-06	E02-18		A1	1	BIT 1	7	T1	E03-18	1
G01-14	F02-17		A2	2	BIT 3				
F01-08	E02-24		A3	24	BIT 5				
F02-20	E02-22		A4	22	BIT 7				
F01-12	E02-14		A5	23	BIT 9				
F02-13		T	A6	5	BIT 11				
E02-05		T	A7	4	BIT 13				
F02-15		T	A8	3	BIT 15				
			PI	6					

12160 LOC: F02 NAME: B011

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G01-16	E02-13		A1	18	BIT 2	11	T1	E03-01	1
F02-02		T	A2	17	BIT 3				
F01-06	E02-01		A3	16	BIT 6				
F01-16	F02-22		A4	20	BIT 7				
E02-19		T	A5	19	BIT 10				
E01-06	F02-05		A6	13	BIT 11				
E02-04		T	A7	14	BIT 14				
E02-03	F02-03		A8	15	BIT 15				
			PI	12					

12160 LOC: E02 NAME: B012

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G01-12	E02-16		A1	23	BIT 4	7	T1	E03-20	1
F02-24		T	A2	24	BIT 5				
F02-16		T	A3	1	BIT 6				
E02-20		T	A4	22	BIT 7				
E02-17		T	A5	2	BIT 12				
E01-14	F02-04		A6	5	BIT 13				
E01-12	F02-14		A7	4	BIT 14				
E02-15	F02-15		A8	3	BIT 15				
			PI	6					

12160 LOC: E02 NAME: B013

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F02-01		T	A1	18	BIT 1	11	T1	E03-19	1
F02-18		T	A2	13	BIT 2				
E02-23		T	A3	16	BIT 4				
F02-20	E02-22		A4	20	BIT 7				
F02-23		T	A5	14	BIT 9				
E01-08	F02-19		A6	19	BIT 10				
E01-16	E02-02		A7	17	BIT 12				
D01-08	E02-03		A8	15	BIT 15				
			PI	12					

12160 LOC: C02 NAME: B230

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D01-16	B02-18		A1	2	BIT 17	7	T1	C03-02	1
D01-12	C02-18		A2	1	BIT 19				
C01-06	B02-04		A3	4	BIT 21				
C02-20	B02-22		A4	22	BIT 23				
B02-16		T	A5	24	BIT 25				
C02-16		T	A6	3	BIT 27				
B02-23		T	A7	23	BIT 29				
C02-14		T	A8	5	BIT 31				
			PI	6					

12160 LOC: C02 NAME: B231

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D01-14	B02-19		A1	19	BIT 18	11	T1	C03-01	1
C02-01		T	A2	18	BIT 19				
C01-16	B02-02		A3	17	BIT 22				
C01-14	C02-22		A4	20	BIT 23				
B01-06	B02-13		A5	13	BIT 26				
B01-16	C02-03		A6	16	BIT 27				
B02-24		T	A7	15	BIT 30				
B02-05	C02-02		A8	14	BIT 31				
			PI	12					

12160 LOC: B02 NAME: B232

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C01-08	B02-15		A1	3	BIT 20	7	T1	C03-19	1
C02-04		T	A2	4	BIT 21				
C02-17		T	A3	2	BIT 22				
C02-22	B02-20		A4	22	BIT 23				
B02-17		T	A5	1	BIT 28				
B01-12	C02-23		A6	23	BIT 29				
A01-08	C02-15		A7	24	BIT 30				
B02-14	C02-14		A8	5	BIT 31				
			PI	6					

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION

7BWH ; AIU / 3W00
AD112 - C

DWG NO 60458190
REV J
SHEET CMC 4.6-00A
17-80

12160 LOC: B02 NAME: B233

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C02-02		T	A1	18	BIT 17	11	T1	C03-20	1
C02-19		T	A2	19	BIT 18				
B02-03		T	A3	15	BIT 20				
B02-22		T	A4	20	BIT 23				
B01-08	C02-24		A5	16	BIT 25				
C02-13		T	A6	13	BIT 26				
B01-14	B02-01		A7	17	BIT 28				
A01-06	B02-05		A8	14	BIT 31				
			P1	12					

12151 LOC: G04 NAME: RDA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F03-04		T	D1	19	DATA	12	T1	E05-03	2
					BIT 0	11	F1	TERM	
F03-02		T	D2	18	BIT 1	14	T2	E05-04	2
						13	F2	TERM	
F03-24		T	D3	1	BIT 2	6	T3	E05-23	2
						5	F3	TERM	
F03-23		T	D4	2	BIT 3	3	T4	E05-24	2
						4	F4	TERM	
F03-03		T	D5	17	BIT 4	16	T5	E05-05	2
						15	F5	TERM	
F03-05		T	D6	20	BIT 5	8	T6	E05-22	2
						7	F6	TERM	
D05-03		T	C1	24	NOTE: C1 FROM TOT2, PIN F1				
D03-02		T	C2	23	C2 FROM MCF, PIN T2				
			MS	22					

12151 LOC: F04 NAME: RDB

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F03-22		T	D1	20	DATA	8	T1	E05-01	2
					BIT 6	7	F1	TERM	
F03-01		T	D2	2	BIT 7	3	T2	E05-02	2
						4	F2	TERM	
F03-16		T	D3	17	BIT 8	16	T3	E05-15	2
						15	F3	TERM	
F03-20		T	D4	1	BIT 9	6	T4	E05-18	2
						5	F4	TERM	
F03-13		T	D5	18	BIT 10	14	T5	E05-14	2
						13	F5	TERM	
F03-19		T	D6	19	BIT 11	12	T6	E05-17	2
						11	F6	TERM	
D05-04		T	C1	24	NOTE: C1 FROM TOT2, PIN F2				
E03-23		T	C2	23	C2 FROM MCF, PIN T3				
			MS	22					

12151 LOC: E04 NAME: RDC

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F03-18		T	D1	20	DATA	8	T1	E05-16	2
					BIT 12	7	F1	TERM	
F03-17		T	D2	1	BIT 13	6	T2	E05-19	2
						5	F2	TERM	
F03-14		T	D3	19	BIT 14	12	T3	E05-13	2
						11	F3	TERM	
F03-15		T	D4	2	BIT 15	3	T4	E05-20	2
						4	F4	TERM	
B03-23		T	D5	18	BIT 16	14	T5	C05-05	2
						13	F5	TERM	
B03-03		T	D6	17	BIT 17	16	T6	C05-03	2
						15	F6	TERM	
D05-05		T	C1	24	NOTE: C1 FROM TOT2, PIN F4				
D03-07		T	C2	23	C2 FROM MCF, PIN T4				
			MS	22					

12151 LOC: C04 NAME: RDD

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B03-01		T	D1	20	DATA	8	T1	C05-01	2
					BIT 18	7	F1	TERM	
B03-02		T	D2	19	BIT 19	12	T2	C05-24	2
						11	F2	TERM	
B03-04		T	D3	18	BIT 20	14	T3	C05-23	2
						13	F3	TERM	
B03-22		T	D4	2	BIT 21	3	T4	C05-04	2
						4	F4	TERM	
B03-05		T	D5	17	BIT 22	16	T5	C05-22	2
						15	F5	TERM	
B03-24		T	D6	1	BIT 23	6	T6	C05-02	2
						5	F6	TERM	
D05-13		T	C1	24	NOTE: C1 FROM TOT2, PIN F5				
D03-11		T	C2	23	C2 FROM MCF, PIN T5				
			MS	22					

12151 LOC: B04 NAME: RDE

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B03-18		T	D1	17	DATA	16	T1	C05-18	2
					BIT 24	15	F1	TERM	
B03-20		T	D2	2	BIT 25	3	T2	C05-16	2
						4	F2	TERM	
B03-19		T	D3	1	BIT 26	6	T3	C05-20	2
						5	F3	TERM	
B03-14		T	D4	20	BIT 27	8	T4	C05-19	2
						7	F4	TERM	
B03-13		T	D5	19	BIT 28	12	T5	C05-13	2
						11	F5	TERM	
B03-16		T	D6	18	BIT 29	14	T6	C05-15	2
						13	F6	TERM	
D05-16		T	C1	24	NOTE: C1 FROM TOT2, PIN F7				
D03-18		T	C2	23	C2 FROM MCF, PIN T7				
			MS	22					

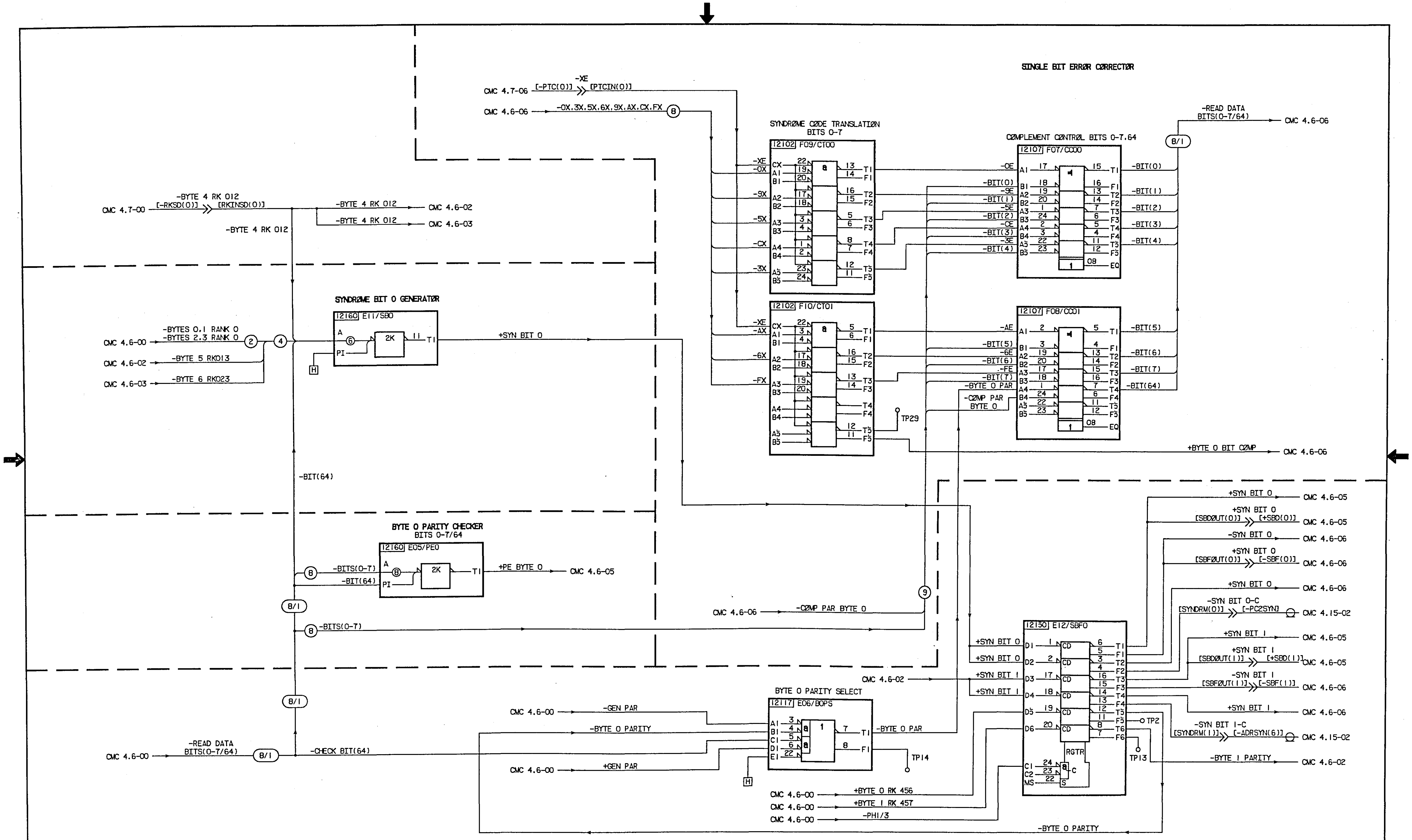
12151 LOC: A04 NAME: RDF

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B03-17		T	D1	2	DATA	3	T1	C05-14	2
					BIT 30	4	F1	TERM	
B03-15		T	D2	1	DATA	6	T2	C05-17	2
					BIT 31	5	F2	TERM	
A02-07		T	D3	19	CODE	12	T3	E05-06	3
					BIT 64	11	F3	TERM	
A02-05		T	D4	20	CODE	8	T4	E05-12	3
					BIT 65	7	F4	TERM	
A02-15		T	D5	17	CODE	16	T5	C05-06	
					BIT 66	15	F5	TERM	
A02-13		T	D6	18	CODE	14	T6	C05-12	
					BIT 67	13	F6	TERM	
D05-15		T	C1	24	NOTE: C1 FROM TOT2, PIN F8				
D03-17		T	C2	23	C2 FROM MCF, PIN T8				
			MS	22					

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION

78WH; AIU /3W00
AD112-C

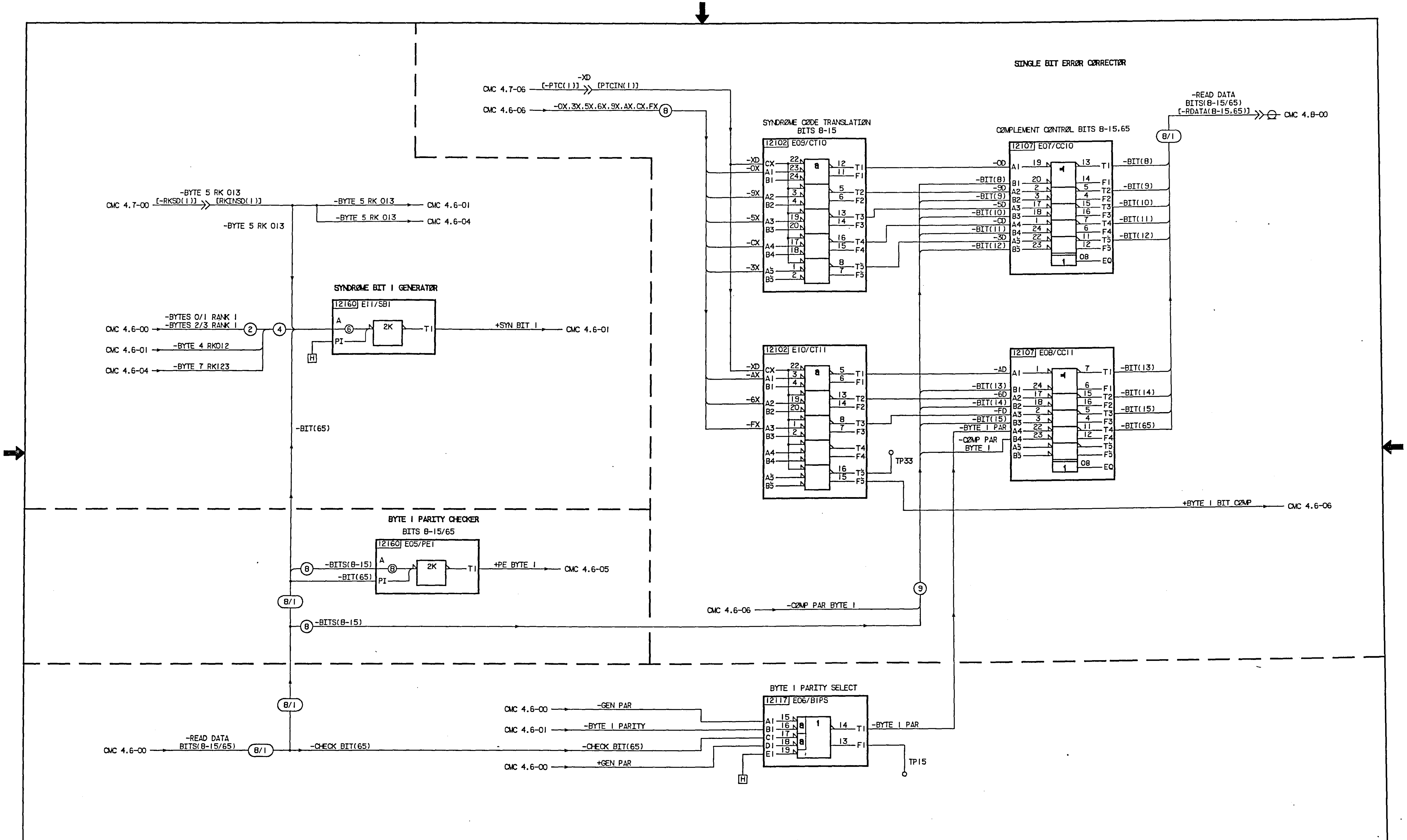
DWG NO 60458190
REV J
SHEET CMC 4.6-008 17-81


SINGLE BIT ERRØR CØRRECTØR
SYNDRØME CØDE TRANSLATIØN BITS 0-7
12102 F09/CT00
12102 F10/CT01
CØMPLEMENT CØNTRØL BITS 0-7,64
12107 F07/CC00
12107 F08/CC01
SYNDRØME BIT 0 GENERATØR
12160 E11/SB0
BYTE 0 PARITY CHECKER BITS 0-7/64
12160 E05/PE0
BYTE 0 PARITY SELECT
12117 E06/B0PS
12150 E12/SBF0
RGTR
CMC 4.7-06 [-PTC(0)] -XE [PTCIN(0)]
CMC 4.6-06 -0X,3X,5X,6X,9X,AX,CX,FX
CMC 4.7-00 -BYTE 4 RK 012 [-RKSD(0)] [RKINSD(0)]
-BYTE 4 RK 012 CMC 4.6-02
-BYTE 4 RK 012 CMC 4.6-03
-BYTE 4 RK 012
CMC 4.6-00 -BYTES 0,1 RANK 0 -BYTES 2,3 RANK 0
CMC 4.6-02 -BYTE 5 RK013
CMC 4.6-03 -BYTE 6 RK023
+SYN BIT 0
-BIT(64)
-BITS(0-7)
-BIT(64)
+PE BYTE 0 CMC 4.6-05
CMC 4.6-06 -CØMP PAR BYTE 0
-BITS(0-7)
CMC 4.6-00 -READ DATA BITS(0-7/64)
-CHECK BIT(64)
CMC 4.6-00 -GEN PAR
-BYTE 0 PARITY
CMC 4.6-00 +GEN PAR
-BYTE 0 PAR
TP14
TP29
-READ DATA BITS(0-7/64) CMC 4.6-06
-BIT(0) -BIT(1) -BIT(2) -BIT(3) -BIT(4)
-BIT(5) -BIT(6) -BIT(7) -BIT(64)
-BYTE 0 PAR
-CØMP PAR BYTE 0
+BYTE 0 BIT CØMP CMC 4.6-06
+SYN BIT 0 CMC 4.6-05
+SYN BIT 0 [SBDØUT(0)] [+SBD(0)] CMC 4.6-05
-SYN BIT 0 CMC 4.6-06
+SYN BIT 0 [SBFØUT(0)] [-SBF(0)] CMC 4.6-06
+SYN BIT 0 CMC 4.6-06
-SYN BIT 0-C [SYNDRM(0)] [-PC2SYN] CMC 4.15-02
+SYN BIT 1 CMC 4.6-05
+SYN BIT 1 [SBDØUT(1)] [+SBD(1)] CMC 4.6-05
-SYN BIT 1 [SBFØUT(1)] [-SBF(1)] CMC 4.6-06
+SYN BIT 1 CMC 4.6-06
-SYN BIT 1-C [SYNDRM(1)] [-ADRSYN(6)] CMC 4.15-02
-BYTE 1 PARITY CMC 4.6-02
TP2
TP13
CMC 4.6-02
CMC 4.6-00 +BYTE 0 RK 456
CMC 4.6-00 +BYTE 1 RK 457
CMC 4.6-00 -PHI/3
-BYTE 0 PARITY

NØTES:

1. BACKUP CHART ØN CMC 4.6-04A.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM - CMC 3.8 SYNDRØME BIT 0 GENERATØR, PARITY CHECKER, SINGLE BIT ERRØR CØRRECTØR, BYTE 0. 7BWH,A1V/3W00 AD112-C	CODE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN		SHEET CMC 4.6-01	PAGE 17-82	



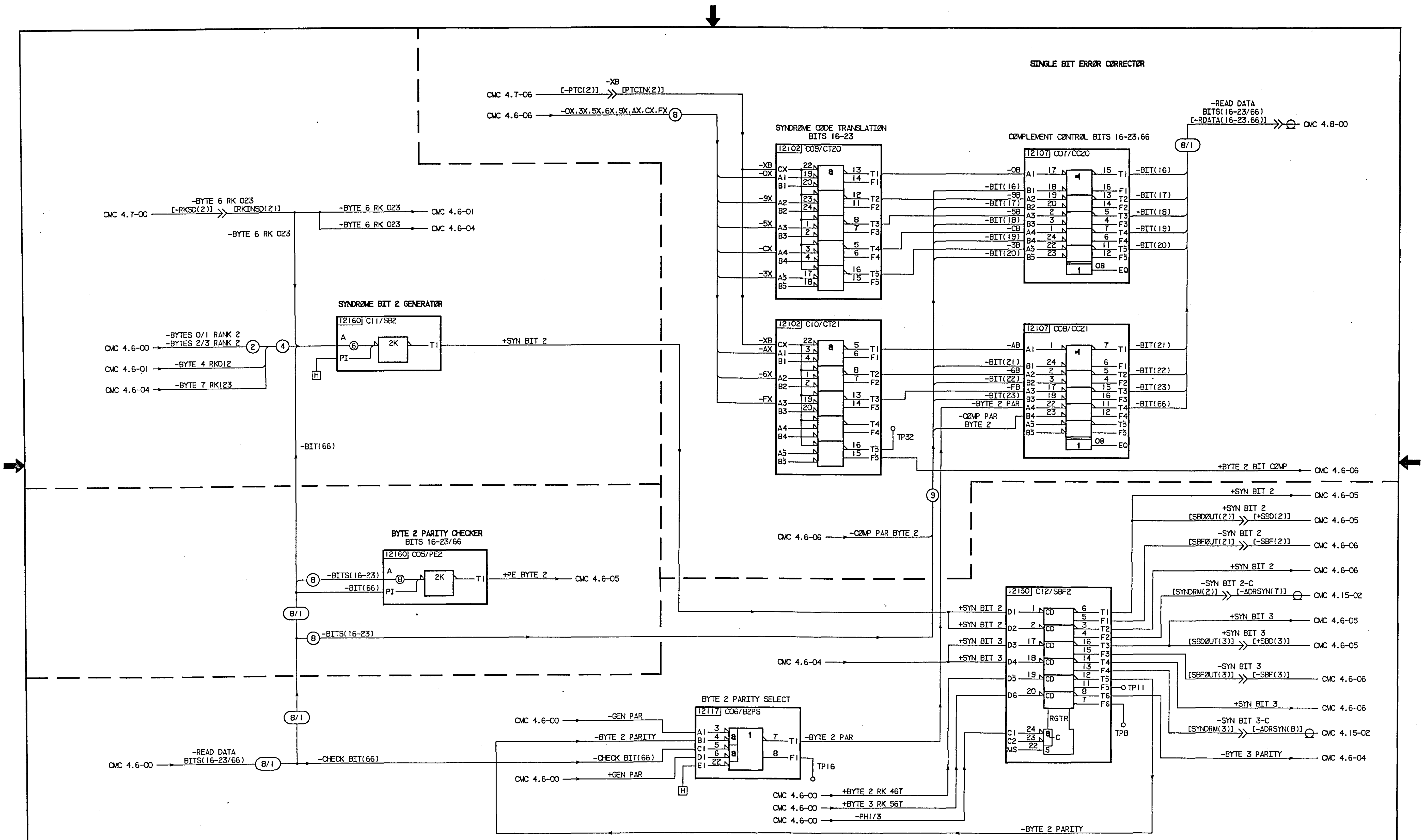
NOTES:

1. BACKUP CHART ON CMC 4.6-04A.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM - CMC 3.8
SYNDROME BIT 1 GENERATOR, PARITY
CHECKER, SINGLE BIT ERROR CORRECTOR,
BYTE 1.
7BWH,A1U/3W00 AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.6-02
PAGE 17-83



NOTES:

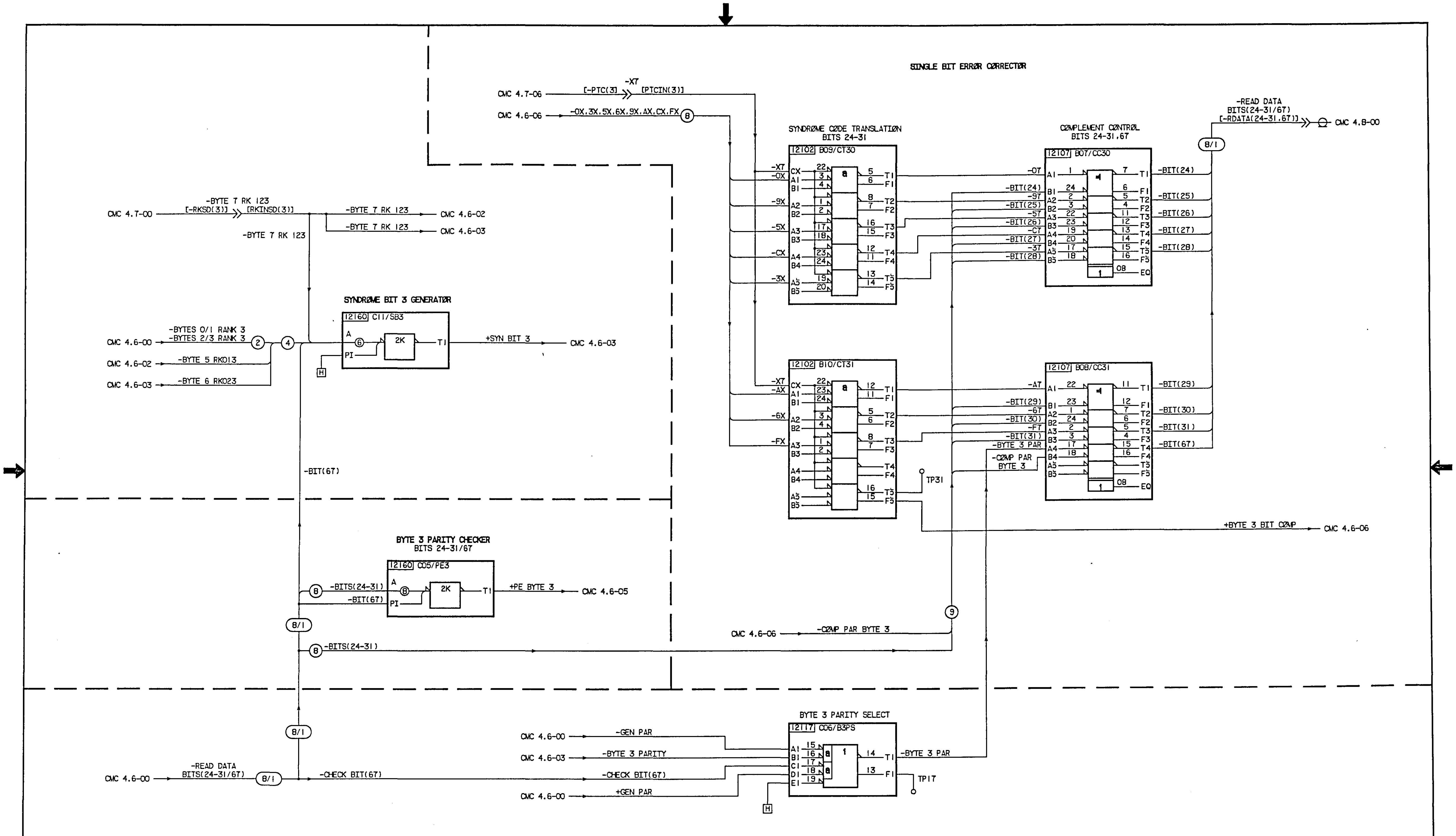
1. BACKUP CHART ON CMC 4.6-04A.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM - CMC 3.8
SYNDROME BIT 2 GENERATOR, PARITY
CHECKER, SINGLE BIT ERROR CORRECTOR,
BYTE 2.
7BWH,A1U/3W00
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.6-03	17-84



NØTES:

1. BACKUP CHART ØN CMC 4.6-04A.

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM - CMC 3.8
SYNDRØME BIT 3 GENERATØR; PARITY
CHECKER; SINGLE BIT 3 ERRØR
CØRECTØR; BYTE 3.
7BWH;A1U/3W00
AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.6-04
PAGE 17-85

12160 LOC: E11 NAME: SB0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E03-14		T	A1	18	BTS 0, 1 RK0	11	T1	D12-23	3
C03-03		T	A2	17	BTS 2,3 RK0				
E11-01	C11-03		A3	16	BYTE 4 RK0				
E11-02	C11-15		A4	15	BYTE 5 RK0				
C11-19		T	A5	19	BYTE 6 RK0				
E06-05	P1B-11		A6	20	BIT 64				
			A7						
			A8						
			PI						

12160 LOC: E05 NAME: PE0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
G04-12	F07-18		A1	3	BIT 0	7	T1	B14-15	1
G04-14	F07-20		A2	4	BIT 1				
G04-06	F07-24		A3	23	BIT 2				
G04-03	F07-03		A4	24	BIT 3				
G04-16	F07-23		A5	5	BIT 4				
G04-08	F08-03		A6	22	BIT 5				
F04-08	F08-20		A7	1	BIT 6				
F04-03	F08-18		A8	2	BIT 7				
A04-12	E06-05		PI	6	BIT 64				

1. BYTE 0, LØGIC ØN CMC 4.6-01

12160 LOC: C11 NAME: SB2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E03-08		T	A1	5	BTS 0, 1 RK2	7	T1	C12-01	3
C03-12		T	A2	4	BTS 2,3 RK2				
E11-16		T	A3	3	BYTE 4 RK2				
P1B-40	C11-19		A4	2	BYTE 6 RK2				
P1B-38	C11-20		A5	1	BYTE 7 RK2				
C06-05	P1B-19		A6	22	BIT 66				
			A7						
			A8						
			PI						

12160 LOC: C05 NAME: PE2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E04-14	C07-18		A1	5	BIT 16	7	T1	B14-17	1
E04-16	C07-20		A2	3	BIT 17				
C04-08	C07-03		A3	1	BIT 18				
C04-12	C07-24		A4	24	BIT 19				
C04-14	C07-23		A5	23	BIT 20				
C04-03	C08-24		A6	4	BIT 21				
C04-16	C08-03		A7	22	BIT 22				
C04-06	C08-18		A8	2	BIT 23				
A04-16	C06-05		PI	6	BIT 66				

1. BYTE 2, LØGIC ON CMC 4.6-03

12160 LOC: E11 NAME: SB1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E03-06		T	A1	4	BTS 0, 1 RK1	7	T1	E12-17	3
C03-06		T	A2	5	BTS 2,3 RK1				
P2B-02	E11-16		A3	1	BYTE 4, RK1				
P2B-04	E11-15		A4	2	BYTE 5, RK1				
C11-20		T	A5	23	BYTE 7, RK1				
E06-17	P1B-15		A6	22	BIT 65				
			A7						
			A8						
			PI						

12160 LOC: E05 NAME: PE1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F04-16	E07-20		A1	15	BIT 8	11	T1	B14-16	1
F04-06	E07-03		A2	18	BIT 9				
F04-14	E07-18		A3	14	BIT 10				
F04-12	E07-24		A4	17	BIT 11				
E04-08	E07-23		A5	16	BIT 12				
E04-06	E08-24		A6	19	BIT 13				
E04-12	E08-18		A7	13	BIT 14				
E04-03	E08-03		A8	20	BIT 15				
A04-08	E06-17		PI	12	BIT 65				

1. BYTE 1, LØGIC ØN CMC 4.6-02

12160 LOC: C11 NAME: SB3

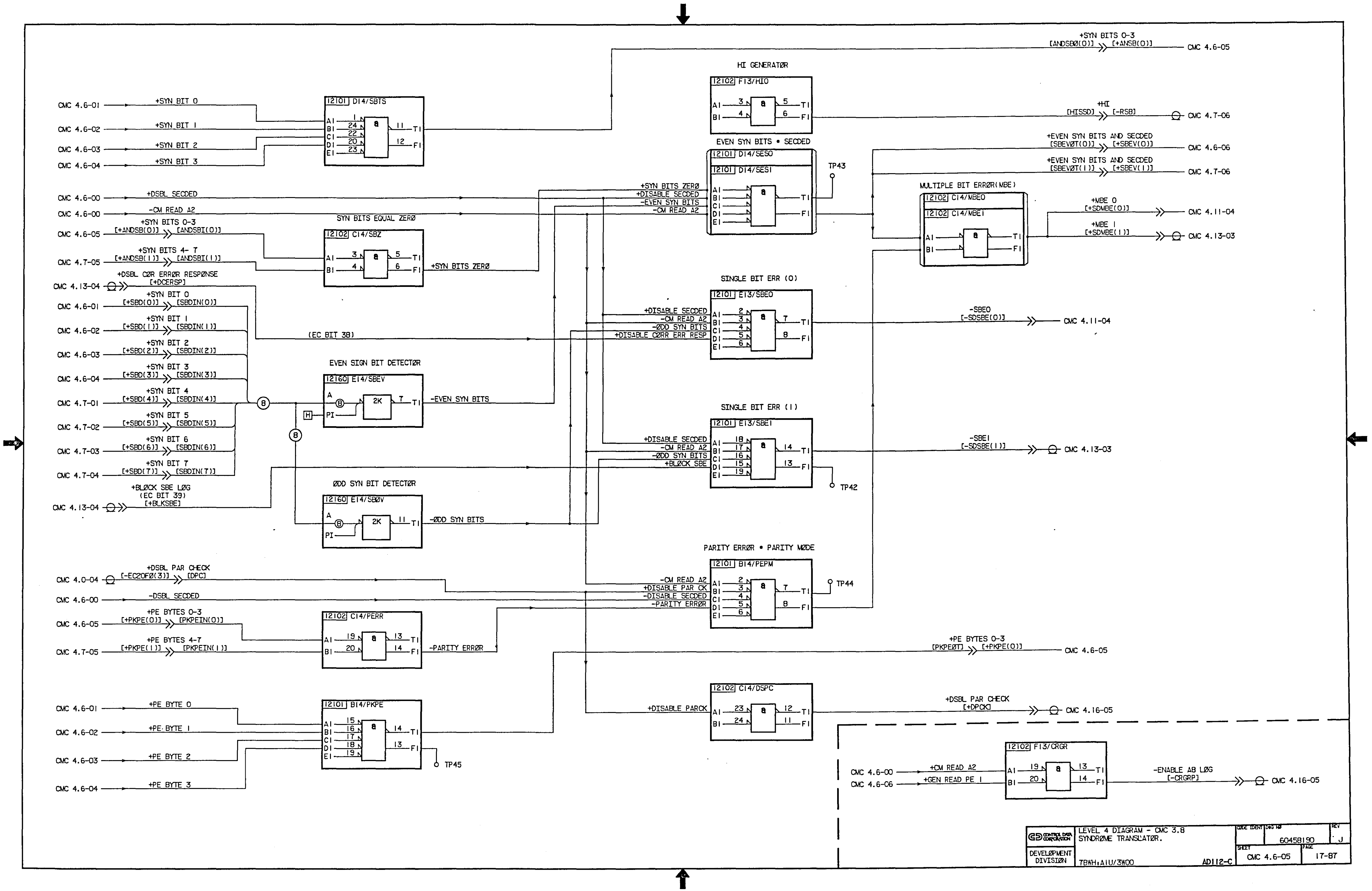
SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E03-12		T	A1	18	BTS 0, 1 RK3	11	T1	C12-17	3
C03-08		T	A2	17	BTS 2,3 RK3				
E11-15		T	A3	15	BYTE 5, RK3				
C11-02	E11-19		A4	19	BYTE 6, RK3				
C11-01	E11-23		A5	20	BYTE 7, RK3				
C06-17	P1B-23		A6	14	BIT 67				
			A7						
			A8						
			PI						

12160 LOC: C05 NAME: PE3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B04-16	B07-24		A1	18	BIT 24	11	T1	B14-18	1
B04-03	B07-03		A2	16	BIT 25				
B04-06	B07-23		A3	20	BIT 26				
B04-08	B07-20		A4	19	BIT 27				
B04-12	B07-18		A5	13	BIT 28				
B04-14	B08-23		A6	15	BIT 29				
A04-03	B08-24		A7	14	BIT 30				
A04-06	B08-03		A8	17	BIT 31				
A04-14	C06-17		PI	12	BIT 67				

1. BYTE 3, LØGIC ØN CMC 4.6-04

CONTROL DATA CORPORATION ARDEN HILLS OPERATIONS	LEVEL 4 BACKUP CHART SUPPLEMENTAL WIRING INFORMATION CMC 4.6-01, 4.6-02, 4.6-03, 4.6-04 7BWH; A1U/3W00 AD112-C	CODE IDENT 34010	D	DWG NO 60458190	REV J
				SHEET CMC 4.6-04A	17-86


CMC 4.6-01 +SYN BIT 0
CMC 4.6-02 +SYN BIT 1
CMC 4.6-03 +SYN BIT 2
CMC 4.6-04 +SYN BIT 3
12101 D14/SBTS
CMC 4.6-00 +DSBL SECDED
CMC 4.6-00 -CM READ A2
+SYN BITS 0-3 [+ANDSB(0)] [ANDSBI(0)] CMC 4.6-05
+SYN BITS 4-7 [+ANDSB(1)] [ANDSBI(1)] CMC 4.7-05
SYN BITS EQUAL ZERO
12102 C14/SBZ
+SYN BITS ZERO
+DSBL COR ERROR RESPONSE [+DCERSP] CMC 4.13-04
+SYN BIT 0 [+SBD(0)] [SBDIN(0)] CMC 4.6-01
+SYN BIT 1 [+SBD(1)] [SBDIN(1)] CMC 4.6-02
+SYN BIT 2 [+SBD(2)] [SBDIN(2)] CMC 4.6-03
+SYN BIT 3 [+SBD(3)] [SBDIN(3)] CMC 4.6-04
+SYN BIT 4 [+SBD(4)] [SBDIN(4)] CMC 4.7-01
+SYN BIT 5 [+SBD(5)] [SBDIN(5)] CMC 4.7-02
+SYN BIT 6 [+SBD(6)] [SBDIN(6)] CMC 4.7-03
+SYN BIT 7 [+SBD(7)] [SBDIN(7)] CMC 4.7-04
(EC BIT 38)
EVEN SIGN BIT DETECTOR
12160 E14/SBEV
2K
-EVEN SYN BITS
ODD SYN BIT DETECTOR
12160 E14/SBOV
-ODD SYN BITS
+BLOCK SBE LOG (EC BIT 39) [+BLKSBE] CMC 4.13-04
+DSBL PAR CHECK [-EC20F0(3)] [DPC] CMC 4.0-04
CMC 4.6-00 -DSBL SECDED
+PE BYTES 0-3 [+PKPE(0)] [PKPEIN(0)] CMC 4.6-05
+PE BYTES 4-7 [+PKPE(1)] [PKPEIN(1)] CMC 4.7-05
12102 C14/PERR
-PARITY ERROR
CMC 4.6-01 +PE BYTE 0
CMC 4.6-02 +PE BYTE 1
CMC 4.6-03 +PE BYTE 2
CMC 4.6-04 +PE BYTE 3
12101 B14/PKPE
TP45
HI GENERATOR
12102 F13/HIO
+SYN BITS 0-3 [ANDSB0(0)] [+ANSB(0)] CMC 4.6-05
+HI [HISSD] [-RSB] CMC 4.7-06
EVEN SYN BITS • SECDED
12101 D14/SESO
12101 D14/SESI
+SYN BITS ZERO
+DISABLE SECDED
-EVEN SYN BITS
-CM READ A2
TP43
+EVEN SYN BITS AND SECDED [SBEV0T(0)] [+SBEV(0)] CMC 4.6-06
+EVEN SYN BITS AND SECDED [SBEV0T(1)] [+SBEV(1)] CMC 4.7-06
MULTIPLE BIT ERROR(MBE)
12102 C14/MBEO
12102 C14/MBEI
+MBE 0 [+SDMBE(0)] CMC 4.11-04
+MBE 1 [+SDMBE(1)] CMC 4.13-03
SINGLE BIT ERR (0)
12101 E13/SBEO
+DISABLE SECDED
-CM READ A2
-ODD SYN BITS
+DISABLE CORR ERR RESP
-SBEO [-SDSBE(0)] CMC 4.11-04
SINGLE BIT ERR (1)
12101 E13/SBEI
+DISABLE SECDED
-CM READ A2
-ODD SYN BITS
+BLOCK SBE
-SBEI [-SDSBE(1)] CMC 4.13-03
TP42
PARITY ERROR • PARITY MODE
12101 B14/PEPM
-CM READ A2
+DISABLE PAR CK
-DISABLE SECDED
-PARITY ERROR
TP44
+PE BYTES 0-3 [PKPE0T] [+PKPE(0)] CMC 4.6-05
12102 C14/DSPC
+DISABLE PARCK
+DSBL PAR CHECK [+DPCK] CMC 4.16-05
12102 F13/CRGR
CMC 4.6-00 +CM READ A2
CMC 4.6-06 +GEN READ PE 1
-ENABLE AB LOG [-CRGRP] CMC 4.16-05

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM - CMC 3.8
SYNDROME TRANSLATOR.

7BWH;A1U/3W00
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.6-05	17-87

12160 LOC: E14 NAME: SBEV

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E14-14		T	A1	4	SYN BIT 0	7	T1	D14-04	2
E14-19		T	A2	23	SYN BIT 1				
P2B-17	E14-20		A3	24	SYN BIT 2				
P2B-21	E14-17		A4	1	SYN BIT 3				
E14-13		T	A5	5	SYN BIT 4				
E14-18		T	A6	22	SYN BIT 5				
P2B-18	E14-15		A7	3	SYN BIT 6				
P2B-20	E14-16		A8	2	SYN BIT 7				
"BIAS 0"			P1	6	+ HI				

12160 LOC: E14 NAME: SB0D

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P2B-09	E14-04		A1	14	SYN BIT 0	11	T1	E13-16	2
P2B-13	E14-23		A2	19	SYN BIT 1				
E14-24		T	A3	20	SYN BIT 2				
E14-01		T	A4	17	SYN BIT 3				
P2B-08	E14-05		A5	13	SYN BIT 4				
P2B-12	E14-22		A6	18	SYN BIT 5				
E14-03		T	A7	15	SYN BIT 6				
E14-02		T	A8	16	SYN BIT 7				
			P1						

12101 LOC: D14 NAME: SES0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
C14-06	D14-02		A1	18		14	T1	TERM	1
D14-03	B14-02		B1	17		13	F1	C14-01	2
D14-04		T	C1	16					
D11-14	D14-05		D1	15					
			E1	19					

12101 LOC: D14 NAME: SES1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D14-18		T	A1	2		7	T1	TP-43	1
E13-17	D14-17		B1	3		8	F1	C14-17	2
E14-07	D14-16		C1	4					
D14-15	E13-18		D1	5					
			E1	6					

12102 LOC: C14 NAME: MBE0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D14-13	P2B-14		A1	1	MBE	8	T1	P1B-22	1
C14-18		T	B1	2		7	F1	TERM	

12102 LOC: C14 NAME: MBE1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D14-08	P2B-06		A1	17	MBE	16	T1	P1C-182	
B14-08	C14-02		B1	18		15	F1	TERM	

12101 LOC: E13 NAME: SBE0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E13-18		T	A1	2		7	T1	P2B-22	1
P1C-170	E13-17		B1	3		8	F1	TERM	1
E13-16		T	C1	4					
P1C-169		T	D1	5					
			E1	6					

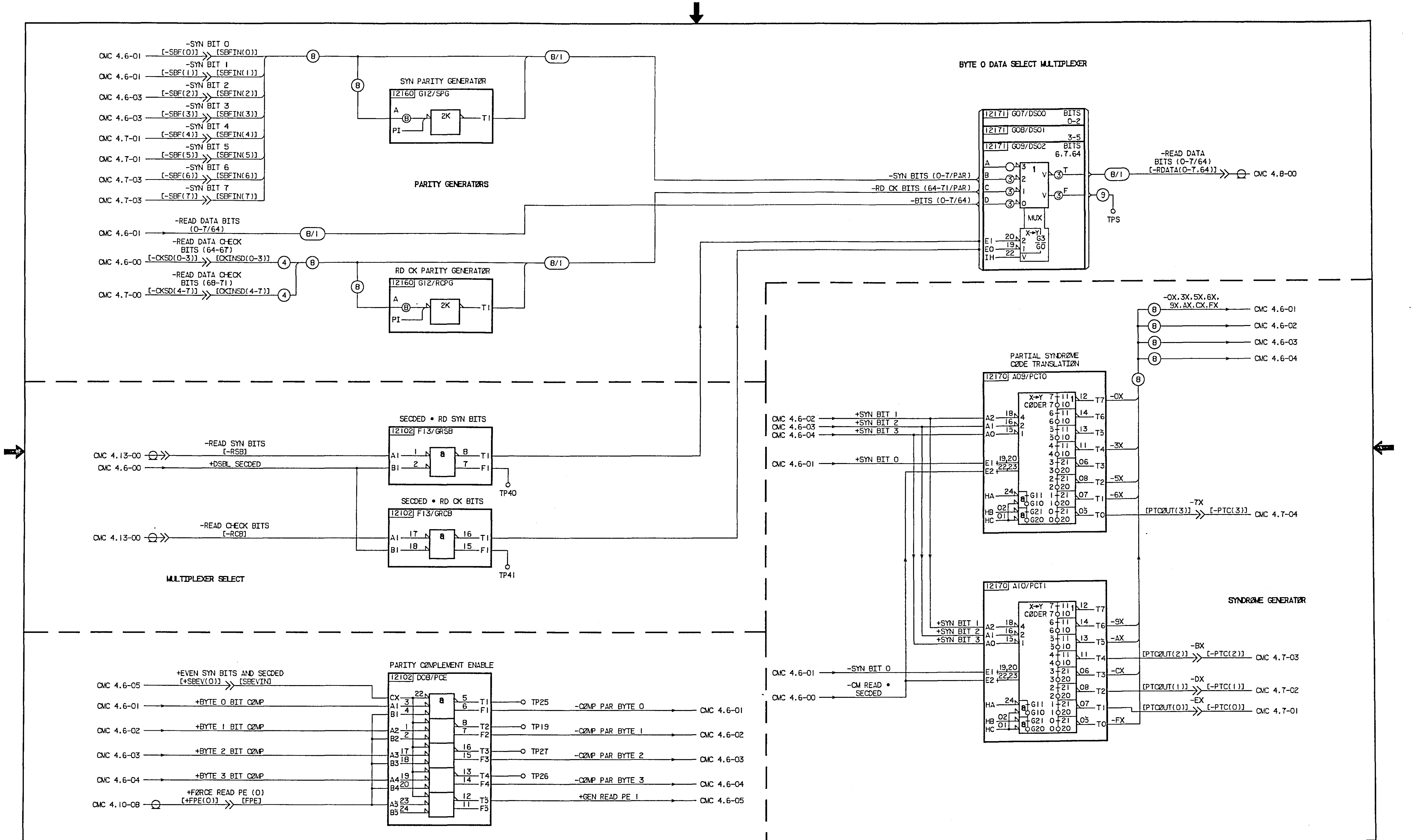
12101 LOC: E13 NAME: SBE1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D14-05	E13-02		A1	18		14	T1	P1C-165	1
E13-03	D14-03		B1	17		13	F1	TP-42	1
E14-11	E13-04		C1	16					
P1C-166		T	D1	15					
			E1	19					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
7BWH; AIU/3W00 AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.6-05A
17-88


PARITY GENERATØRS
SYN PARITY GENERATØR
12160 G12/SPG
RD CK PARITY GENERATØR
12160 G12/RCPG
-SYN BIT 0 [-SBF(0)] [SBFIN(0)] CMC 4.6-01
-SYN BIT 1 [-SBF(1)] [SBFIN(1)] CMC 4.6-01
-SYN BIT 2 [-SBF(2)] [SBFIN(2)] CMC 4.6-03
-SYN BIT 3 [-SBF(3)] [SBFIN(3)] CMC 4.6-03
-SYN BIT 4 [-SBF(4)] [SBFIN(4)] CMC 4.7-01
-SYN BIT 5 [-SBF(5)] [SBFIN(5)] CMC 4.7-01
-SYN BIT 6 [-SBF(6)] [SBFIN(6)] CMC 4.7-03
-SYN BIT 7 [-SBF(7)] [SBFIN(7)] CMC 4.7-03
-READ DATA BITS (0-7/64) CMC 4.6-01
-READ DATA CHECK BITS (64-67) [-CKSD(0-3)] [CKINSD(0-3)] CMC 4.6-00
-READ DATA CHECK BITS (68-71) [-CKSD(4-7)] [CKINSD(4-7)] CMC 4.7-00
BYTE 0 DATA SELECT MULTIPLEXER
12171 G07/DS00 BITS 0-2
12171 G08/DS01 3-5
12171 G09/DS02 BITS 6,7,64
-SYN BITS (0-7/PAR)
-RD CK BITS (64-71/PAR)
-BITS (0-7/64)
MUX
-READ DATA BITS (0-7/64) [-RDATA(0-7,64)] CMC 4.8-00
TP5
MULTIPLEXER SELECT
SECDED • RD SYN BITS
12102 F13/GRSB
-READ SYN BITS [-RSB] CMC 4.13-00
+DSBL SECDED CMC 4.6-00
TP40
SECDED • RD CK BITS
12102 F13/GRCB
-READ CHECK BITS [-RCB] CMC 4.13-00
TP41
PARITY CØMPLEMENT ENABLE
12102 D08/PCE
+EVEN SYN BITS AND SECDED [+SBEV(0)] [SBEVIN] CMC 4.6-05
+BYTE 0 BIT CØMP CMC 4.6-01
+BYTE 1 BIT CØMP CMC 4.6-02
+BYTE 2 BIT CØMP CMC 4.6-03
+BYTE 3 BIT CØMP CMC 4.6-04
+FØRCE READ PE (0) [+FPE(0)] [FPE] CMC 4.10-08
TP25 -CØMP PAR BYTE 0 CMC 4.6-01
TP19 -CØMP PAR BYTE 1 CMC 4.6-02
TP27 -CØMP PAR BYTE 2 CMC 4.6-03
TP26 -CØMP PAR BYTE 3 CMC 4.6-04
+GEN READ PE 1 CMC 4.6-05
SYNDRØME GENERATØR
PARTIAL SYNDRØME CØDE TRANSLATIØN
12170 A09/PCT0
12170 A10/PCT1
X→Y CØDER
+SYN BIT 1 CMC 4.6-02
+SYN BIT 2 CMC 4.6-03
+SYN BIT 3 CMC 4.6-04
+SYN BIT 0 CMC 4.6-01
-SYN BIT 0 CMC 4.6-01
-CM READ • SECDED CMC 4.6-00
-0X,3X,5X,6X, 9X,AX,CX,FX CMC 4.6-01 CMC 4.6-02 CMC 4.6-03 CMC 4.6-04
-0X -3X -5X -6X
-TX [PTCØUT(3)] [-PTC(3)] CMC 4.7-04
-9X -AX -CX -FX
-BX [PTCØUT(2)] [-PTC(2)] CMC 4.7-03
-DX [PTCØUT(1)] [-PTC(1)] CMC 4.7-02
-EX [PTCØUT(0)] [-PTC(0)] CMC 4.7-01

CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CMC 3.8
PARITY GENERATØR, MULTIPLEXER SELECT,
BYTE 0 DATA SELECT MUX, SYNDRØME
GENERATØR, PARITY CØMPLEMENT ENABLE
7BWH,A1U/3W00 AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.6-06
PAGE 17-89

12160 LOC: G12 NAME: SPG

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P2B-27	G07-16		A1	1	SYN BIT 0	7	T1	G09-24	1
P2B-31	G07-24		A2	2	SYN BIT 1				
P2B-35	G07-04		A3	3	SYN BIT 2				
P2B-39	G08-16		A4	22	SYN BIT 3				
P2B-24	G08-24		A5	23	SYN BIT 4				
P2B-30	G08-04		A6	4	SYN BIT 5				
P2B-34	G09-16		A7	24	SYN BIT 6				
P2B-38	G09-04		A8	5	SYN BIT 7				
			PI						

12160 LOC: G12 NAME: RCPG

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P1B-09	G07-17		A1	13	CK BIT 64	11	T1	G09-01	1
P1B-13	G07-01		A2	19	CK BIT 65				
P1B-17	G07-05		A3	15	CK BIT 66				
P1B-21	G08-17		A4	16	CK BIT 67				
P1B-12	G08-01		A5	17	CK BIT 68				
P1B-18	G08-05		A6	20	CK BIT 69				
P1B-20	G09-17		A7	14	CK BIT 70				
P1B-24	G09-05		A8	18	CK BIT 71				
			PI						

12171 LOC: G07 NAME: DS00

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	15	DATA BIT 0	14	T1	PIC-59	1
G12-01		T	B1	16		13	F1	TP-21	1
G12-13		T	C1	17					
F07-15		T	D1	18					
			A2	23	DATA BIT 1	11	T2	PIC-60	1
G12-02		T	B2	24		12	F2	TP-20	1
G12-19		T	C2	1					
F07-13		T	D2	2					
			A3	3	DATA BIT 2	7	T3	PIC-63	1
G12-03		T	B3	4		8	F3	TP-18	1
G12-15		T	C3	5					
F07-07		T	D3	6					
G08-20		T	E1	20					
G08-19		T	E0	19					
			IH	22					

12171 LOC: G08 NAME: DS01

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	15	DATA BIT 3	14	T1	PIC-64	1
G12-22		T	B1	16		13	F1	TP-24	1
G12-16		T	C1	17					
F07-05		T	D1	18					
			A2	23	DATA BIT 4	11	T2	PIC-67	1
G12-23		T	B2	24		12	F2	TP-22	1
G12-17		T	C2	1					
F07-11		T	D2	2					
			A3	3	DATA BIT 5	7	T3	PIC-68	1
G12-04		T	B3	4		8	F3	TP-23	1
G12-20		T	C3	5					
F08-05		T	D3	6					
G09-20	G07-20		E1	20					
G09-19	G07-19		E0	19					
			IH	22					

12171 LOC: G09 NAME: DS02

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	15	DATA BIT 6	14	T1	PIC-71	1
G12-24		T	B1	16		13	F1	TP-34	1
G12-14		T	C1	17					
F08-13		T	D1	18					
			A2	3	DATA BIT 7	7	T2	PIC-72	1
G12-05		T	B2	4		8	F2	TP-28	1
G12-18		T	C2	5					
F08-15		T	D2	6					
			A3	23	PARITY BIT 64	11	T3	PIC-125	1
G12-07		T	B3	24		12	F3	TP-30	1
G12-11		T	C3	1					
F08-07		T	D3	2					
F13-08	G08-20		E1	20					
F13-16	G08-19		E0	19					
			IH	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION

7BWH; AIU/3W00 AD112 – C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.6-06A
17-90

LEFT ZIF ⚠1

BIT NAME		I/Ø	SHEET CMC 4.6-	TYPE	VIRTUAL PIN	REAL PIN
TRDATA (0)	TRDATA (0)	I	00	D	W00	P2A-33
FRDATA (0)	FRDATA (0)				24	32
(1)	(1)				01	35
(1)	(1)				25	34
(2)	(2)				02	31
(2)	(2)				26	30
(3)	(3)				03	38
(3)	(3)				27	37
(4)	(4)				04	39
(4)	(4)				28	40
(5)	(5)				05	28
(5)	(5)				29	29
(6)	(6)				06	26
(6)	(6)				2A	27
(7)	(7)				07	20
(7)	(7)				2B	19
(8)	(8)-				08	22
(8)	(8)				2C	21
(9)	(9)				09	24
(9)	(9)				2D	23
(10)	(10)				0A	17
(10)	(10)				2E	18
(11)	(11)				0B	14
(11)	(11)				2F	15
(12)	(12)				0C	09
(12)	(12)				30	08
(13)	(13)				0D	11
(13)	(13)				31	10
(14)	(14)				0E	13
(14)	(14)				32	12
(15)	(15)				0F	06
(15)	(15)				33	07
(16)	(16)				10	03
(16)	(16)				34	P2A-04
(17)	(17)				11	P1A-38
(17)	(17)				35	37
(18)	(18)				12	40
(18)	(18)				36	P1A-39
(19)	(19)				13	P2A-02
(19)	(19)				37	P2A-01
(20)	(20)				14	P1A-34
(20)	(20)				38	35
(21)	(21)				15	32
(21)	(21)				39	33
(22)	(22)				16	27
(22)	(22)				3A	26
(23)	(23)				17	29
(23)	(23)				3B	28
(24)	(24)				18	31
(24)	(24)				3C	30
(25)	(25)				19	23
(25)	(25)				3D	24
(26)	(26)				1A	21
(26)	(26)				3E	22
(27)	(27)				1B	15
(27)	(27)				3F	14
(28)	(28)				1C	18
(28)	(28)				40	17
(29)	(29)				1D	20
(29)	(29)				41	19
(30)	(30)				1E	08
(30)	(30)				42	09
TRDATA (31)	TRDATA (31)				1F	06
FRDATA (31)	FRDATA (31)				43	07
TRDECC (0)	TRDECC (64)				20	12
FRDECC (0)	FRDECC (64)				44	13
(1)	(65)				21	10
(1)	(65)				45	11
(2)	(66)				22	02
(2)	(66)				46	01
TRDECC (3)	TRDECC (67)				23	04
FRDECC (3)	FRDECC (67)	I	00	D	W47	P1A-03

ZIF GRØUND PINS			
P1A-05	P1A-25	P2A-05	P2A-25
P1A-16	P1A-36	P2A-16	P2A-36

CØAX ⚠1

BIT NAME		I/Ø	SHEET CMC 4.6-	TYPE	VIRTUAL PIN	REAL PIN
BLK	BLK	I	00	C	W4A	P1C-170
FPE	FPE (0)		06		74	56
MCK	NCLKN (416)		00		48	40
PHM	CLKPM (71)	I	00		49	52
RDATA (0)	RDATA (0)	Ø	06		80	59
(1)	(1)				81	60
(2)	(2)				82	63
(3)	(3)				83	64
(4)	(4)				84	67
(5)	(5)				85	68
(6)	(6)				86	71
(7)	(7)		06		87	72
(8)	(8)		02		88	75
(9)	(9)				89	76
(10)	(10)				8A	79
(11)	(11)				8B	80
(12)	(12)				8C	83
(13)	(13)				8D	84
(14)	(14)				8E	87
(15)	(15)		02		8F	88
(16)	(16)		03		90	91
(17)	(17)				91	92
(18)	(18)				92	97
(19)	(19)				93	98
(20)	(20)				94	101
(21)	(21)				95	102
(22)	(22)				96	105
(23)	(23)		03		97	106
(24)	(24)		04		98	109
(25)	(25)				99	110
(26)	(26)				9A	113
(27)	(27)				9B	114
(28)	(28)				9C	117
(29)	(29)				9D	118
(30)	(30)				9E	121
(31)	(31)		04		9F	122
(64)	(64)		06		A0	125
(65)	(65)		02		A1	126
(66)	(66)		03		A2	129
RDATA (67)	RDATA (67)		04		A3	130
SDMBE (1)	SDMBE (1)		05		A7	182
SDSBE (1)	SDSBE (1)		05		A5	165
SYNDRM (0)	PC2SYN (0)		01		B8	150
(1)	ADRSYN (6)		01		B9	157
(2)	(7)		03		BA	149
SYNDRM (3)	ADRSYN (8)	Ø	03		BB	158
BLKSBE	BLKSBE	I	05		75	166
DPC	EC2OFØ (3)		05		4C	178
DSD	EC2OFØ (2)		00		4B	142
RCB	RCB		06		4E	174
RSB	RSB	I	06		4D	173
HISSD	RSB	Ø	05		C4	162
CRGRP	CRGRP	Ø			C5	185
DCERSP	DCERSP	I			76	169
DPCK	DPCK	Ø	05	C	WCE	P1C-177

RIGHT ZIF ⚠1

BIT NAME		I/Ø	SHEET CMC 4.6-	TYPE	VIRTUAL PIN	REAL PIN
RKINSD (0)	RKSD (0)	I	01	Z	W4F	P2B-02
(1)	(1)		02		50	04
(2)	(2)		03		51	40
RKINSD (3)	RKSD (3)		04		52	38
CKINSD (0)	CKSD (0)		06		53	09
(1)	(1)				54	13
(2)	(2)				55	17
(3)	(3)				56	21
(4)	(4)				57	12
(5)	(5)				58	18
(6)	(6)				59	P2B-20
CKINSD (7)	CKSD (7)	I	06	Z	W5A	P1B-24
SBEVIN	SBEV (0)	I	06	Z	W6F	P2B-10
PKPEIN (0)	PKPE (0)		05		6D	P1B-03
PKPEIN (1)	PKPE (0)	I	05	Z	W6E	P1B-02
SBFIN (0)	SBF (0)	I	06	Z	W63	P2B-27
(1)	(1)				64	31
(2)	(2)				65	35
(3)	(3)				66	39
(4)	(4)				67	24
(5)	(5)				68	30
(6)	(6)				69	34
SBFIN (7)	SBF (7)		06		6A	38
SBDIN (0)	SBD (0)		05		5B	09
(1)	(1)				5C	13
(2)	(2)				5D	17
(3)	(3)				5E	21
(4)	(4)				5F	08
(5)	(5)				60	12
(6)	(6)				61	18
SBDIN (7)	SBD (7)				62	P2B-20
ANDSBI (0)	ANSB (0)				6B	P1B-06
ANDSBI (1)	ANSB (1)		05		6C	08
PTCIN (3)	PTC (3)		04		73	28
(2)	(2)		03		72	30
(1)	(1)		02		71	32
PTCIN (0)	PTC (0)	I	01		70	P1B-34
RKØTSD (0)	RKSD (0)	Ø	00		A8	P2B-01
(1)	(1)				A9	P2B-03
(2)	(2)				AA	P1B-39
RKØTSD (3)	RKSD (3)				AB	37
CKØTSD (0)	CKSD (0)				AC	11
(1)	(1)				AD	15
(2)	(2)				AE	19
CKØTSD (3)	CKSD (3)		00		AF	23
SBEVØT (0)	SBEV (0)		05		BE	P1B-06
SBEVØT (1)	SBEV (1)	Ø	05	Z	WBF	P2B-14
SDMBE (0)	SDMBE (0)	Ø	05	Z	WA6	P1B-22
PKPEØT	PKPE (0)				BD	P1B-01
SDSBE (0)	SDSBE (0)		05		A4	P2B-22
SBFØUT (0)	SBF (0)		01		B4	23
(1)	(1)		02		B5	29
(2)	(2)		03		B6	33
SBFØUT (3)	SBF (3)		04		B7	37
SBDØUT (0)	SBD (0)		01		B0	07
(1)	(1)		02		B1	11
(2)	(2)		03		B2	15
SBDØUT (3)	SBD (3)		04		B3	P2B-19
ANDSBØ	ANSB (0)		05		BC	P1B-07
PTCØUT (3)	PTC (3)		06		C3	27
(2)	(2)				C2	29
(1)	(1)				C1	31
PTCØUT (0)	PTC (0)	Ø	06	Z	WC0	P1B-33

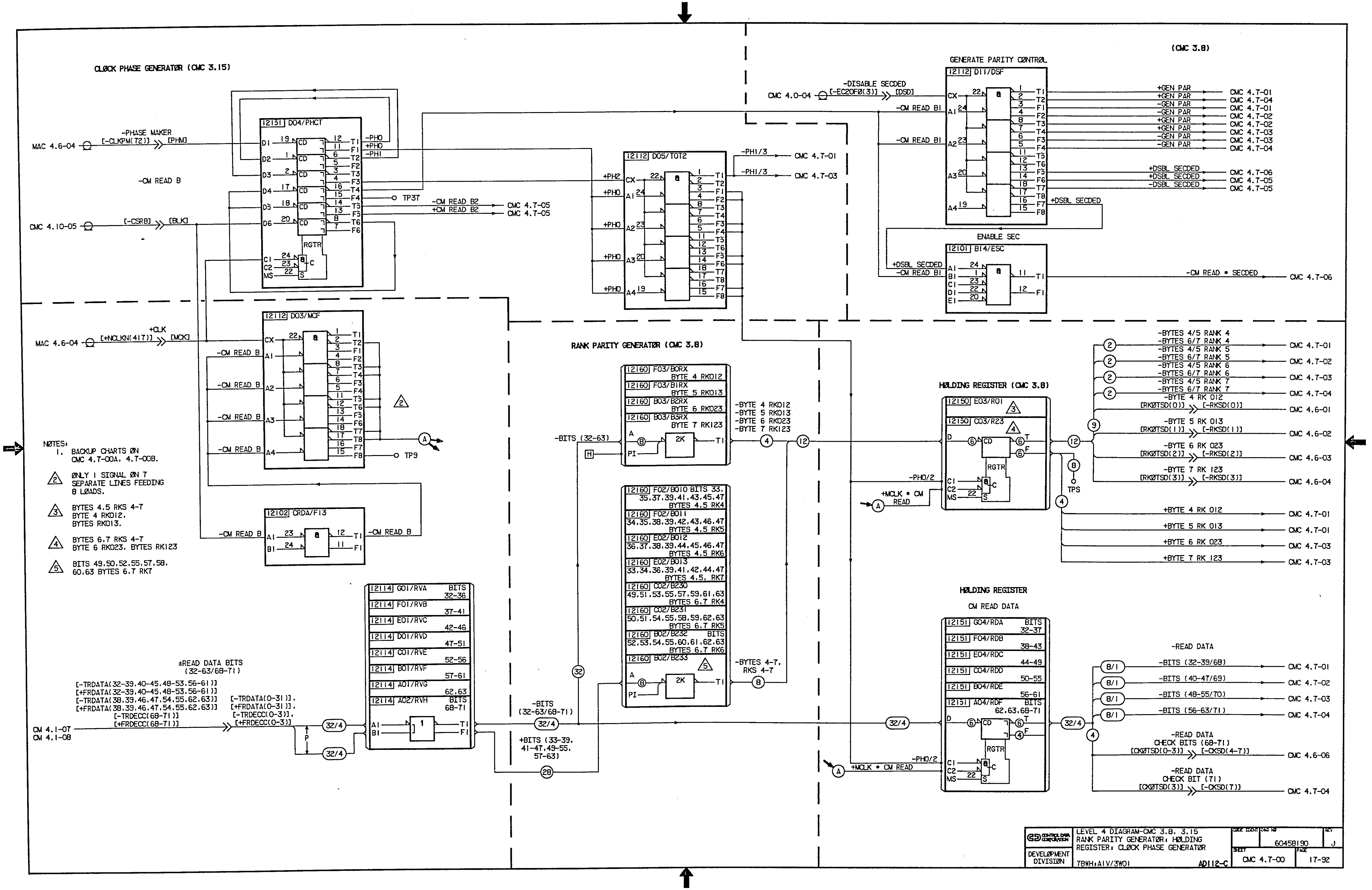
ZIF GRØUND PINS			
P1B-05	P1B-25	P2B-05	P2B-25
P1B-16	P1B-36	P2B-16	P2B-36

NØTES:

⚠1 CØNNECTØR TYPES:

C = CØAX
D = DIFFERENTIAL
Z = ZIF TØ FØIL ØN INTERCØNNECT BØARD

CONTROL DATA CORPORATION	LEVEL 4 CØNNECTØR CHART SUPPLEMENTAL WIRING INFØRMATIØN	CODE IDENT	DWG NØ 60458190	REV J
DEVELØPMENT DIVISIØN	7BWH:A14/3W00 AD112-C	SHEET CMC 4.6-CC		PAGE 17-91



NØTES:
1. BACKUP CHARTS ØN CMC 4.7-00A, 4.7-00B.

2. ØNLY 1 SIGNAL ØN 7 SEPARATE LINES FEEDING 8 LØADS.

3. BYTES 4,5 RKS 4-7 BYTE 4 RK012, BYTES RK013.

4. BYTES 6,7 RKS 4-7 BYTE 6 RK023, BYTES RK123

5. BITS 49,50,52,55,57,58, 60,63 BYTES 6,7 RK7

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CMC 3.8, 3.15
RANK PARITY GENERATØR, HØLDING
REGISTER, CLØCK PHASE GENERATØR

7BWH, A1V/3W01
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.7-00	17-92

12160 LOC: F03 NAME: B0RX

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G01-07	G04-19		A1	4	BIT 32	7	T1	E03-02	1
G01-05	G04-18		A2	2	BIT 33				
G01-15	G04-01		A3	24	BIT 34				
G01-13	G04-02		A4	23	BIT 35				
G01-11	G04-17		A5	3	BIT 36				
F01-07	G04-20		A6	5	BIT 37				
F01-05	F04-20		A7	22	BIT 38				
F01-15	F04-02		A8	1	BIT 39				
			PI	6					

12160 LOC: F03 NAME: B1RX

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F01-13	F04-17		A1	16	BIT 40	11	T1	E03-17	1
F01-11	F04-01		A2	20	BIT 41				
E01-07	F04-18		A3	13	BIT 42				
E01-05	F04-19		A4	19	BIT 43				
E01-15	E04-20		A5	18	BIT 44				
E01-13	E04-01		A6	17	BIT 45				
E01-11	E04-19		A7	14	BIT 46				
D01-07	E04-02		A8	15	BIT 47				
			PI	12					

12160 LOC: B03 NAME: B2RX

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D01-05	E04-18		A1	23	BIT 48	7	T1	C03-17	1
D01-15	E04-17		A2	3	BIT 49				
D01-13	C04-20		A3	1	BIT 50				
D01-11	C04-19		A4	2	BIT 51				
C01-07	C04-18		A5	4	BIT 52				
C01-05	C04-02		A6	22	BIT 53				
C01-15	C04-17		A7	5	BIT 54				
C01-13	C04-01		A8	24	BIT 55				
			PI	6					

12160 LOC: B03 NAME: B3RX

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C01-11	B04-17		A1	18	BIT 56	11	T1	C03-18	1
B01-07	B04-02		A2	20	BIT 57				
B01-05	B04-01		A3	19	BIT 58				
B01-15	B04-20		A4	14	BIT 59				
B01-13	B04-19		A5	13	BIT 60				
B01-11	B04-18		A6	16	BIT 61				
A01-07	A04-02		A7	17	BIT 62				
A01-05	A04-01		A8	15	BIT 63				
			PI	12					

12150 LOC: E03 NAME: R01

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F02-07		T	D1	18	BYTES 4,5	14	T1	E11-18	1
					RK 4	13	F1	TP-03	1
F02-11		T	D2	1	BYTES 4,5	6	T2	E11-04	1
					RK 5	5	F2	TP-01	1
E02-07		T	D3	20	BYTES 4,5	8	T3	C11-05	1
					RK 6	7	F3	TP-04	1
E02-11		T	D4	19	BYTES 4,5	12	T4	C11-18	1
					RK 7	11	F4	TP-05	1
F03-07		T	D5	2	BYTE 4	3	T5	E06-04	2
					RK012	4	F5	E12-19	1
F03-11		T	D6	17	BYTE 5	16	T6	E06-16	2
					RK013	15	F6	E12-20	1
D05-06		T	C1	24	NOTE: C1 FROM TOT2, PIN F3				
D03-08	F04-23		C2	23	C2 FROM MCF, PIN T3				
			MS	22					

12150 LOC: C03 NAME: R23

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C02-07		T	D1	2	BYTES 6,7	3	T1	E11-17	1
					RK 4	4	F1	TP-12	1
C02-11		T	D2	1	BYTES 6,7	6	T2	E11-05	1
					RK 5	5	F2	TP-10	1
B02-07		T	D3	19	BYTES 6,7	12	T3	C11-04	1
					RK 6	11	F3	TP-07	1
B02-11		T	D4	20	BYTES 6,7	8	T4	C11-17	1
					RK 7	7	F4	TP-06	1
B03-07		T	D5	17	BYTE 6	16	T5	C06-04	1
					RK023	15	F5	C12-19	1
B03-11		T	D6	18	BYTE 7	14	T6	C06-16	1
					RK123	13	F6	C12-20	1
D05-14		T	C1	24	NOTE: C1 FROM TOT2, PIN F6				
D03-12		T	C2	23	C2 FROM MCF, PIN T6				
			MS	22					

12114 LOC: G01 NAME: RVA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-33		T	A1	2	DATA	7	T1	F03-04	2
P2A-32		T	B1	1	BIT 32	8	F1	TERM	
P2A-35		T	A2	4	BIT 33	5	T2	F03-02	2
P2A-34		T	B2	3		6	F2	F02-01	2
P2A-31		T	A3	18	BIT 34	15	T3	F03-24	2
P2A-30		T	B3	17		16	F3	F02-18	2
P2A-38		T	A4	20	BIT 35	13	T4	F03-23	2
P2A-37		T	B4	19		14	F4	F02-02	2
P2A-39		T	A5	24	BIT 36	11	T5	F03-03	2
P2A-40		T	B5	23		12	F5	E02-23	2

12114 LOC: F01 NAME: RVB

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-28		T	A1	2	DATA	7	T1	F03-05	2
P2A-29		T	B1	1	BIT 37	8	F1	F02-24	2
P2A-26		T	A2	4	BIT 38	5	T2	F03-22	2
P2A-27		T	B2	3		6	F2	F02-16	2
P2A-20		T	A3	18	BIT 39	15	T3	F03-01	2
P2A-19		T	B3	17		16	F3	F02-20	4
P2A-22		T	A4	20	BIT 40	13	T4	F03-16	2
P2A-21		T	B4	19		14	F4	TERM	
P2A-24		T	A5	24	BIT 41	11	T5	F03-20	2
P2A-23		T	B5	23		12	F5	F02-23	2

12114 LOC: E01 NAME: RVC

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-17		T	A1	2	DATA	7	T1	F03-13	2
P2A-18		T	B1	1	BIT 42	8	F1	F02-19	2
P2A-14		T	A2	4	BIT 43	5	T2	F03-19	2
P2A-15		T	B2	3		6	F2	F02-13	2
P2A-09		T	A3	18	BIT 44	15	T3	F03-18	2
P2A-08		T	B3	17		16	F3	E02-17	
P2A-11		T	A4	20	BIT 45	13	T4	F03-17	2
P2A-10		T	B4	19		14	F4	E02-05	2
P2A-13		T	A5	24	BIT 46	11	T5	F03-14	2
P2A-12		T	B5	23		12	F5	F02-14	2

12114 LOC: D01 NAME: RVD

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-06		T	A1	2	DATA	7	T1	F03-15	2
P2A-07		T	B1	1	BIT 47	8	F1	E02-15	4
P2A-03		T	A2	4	BIT 48	5	T2	B03-23	2
P2A-04		T	B2	3		6	F2	TERM	
P1A-38		T	A3	18	BIT 49	15	T3	B03-03	2
P1A-37		T	B3	17		16	F3	C02-02	2
P1A-40		T	A4	20	BIT 50	13	T4	B03-01	2
P1A-39		T	B4	19		14	F4	C02-19	2
P2A-02		T	A5	24	BIT 51	11	T5	B03-02	2
P2A-01		T	B5	23		12	F5	C02-01	2

12114 LOC: C01 NAME: RVE

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-34		T	A1	2	DATA	7	T1	B03-04	2
P1A-35		T	B1	1	BIT 52	8	F1	B02-03	2
P1A-32		T	A2	4	BIT 53	5	T2	B03-22	2
P1A-33		T	B2	3		6	F2	C02-04	2
P1A-27		T	A3	18	BIT 54	15	T3	B03-05	2
P1A-26		T	B3	17		16	F3	C02-17	2
P1A-29		T	A4	20	BIT 55	13	T4	B03-24	2
P1A-28		T	B4	19		14	F4	C02-20	4
P1A-31		T	A5	24	BIT 56	11	T5	B03-11	2
P1A-30		T	B5	23		12	F5	TERM	

12114 LOC: B01 NAME: RVF

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-23		T	A1	2	DATA	7	T1	B03-20	2
P1A-24		T	B1	1	BIT 57	8	F1	B02-16	2
P1A-21		T	A2	4	BIT 58	5	T2	B03-19	2
P1A-22		T	B2	3		6	F2	C02-13	2
P1A-15		T	A3	18	BIT 59	15	T3	B03-14	2
P1A-14		T	B3	17		16	F3	C02-16	2
P1A-18		T	A4	20	BIT 60	13	T4	B03-13	2
P1A-17		T	B4	19		14	F4	B02-17	2
P1A-20		T	A5	24	BIT 61	11	T5	B03-16	2
P1A-19		T	B5	23		12	F5	B02-23	2

12114 LOC: A01 NAME: RVG

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-08		T	A1	2	DATA	7	T1	B03-17	2
P1A-09		T	B1	1	BIT 62	8	F1	B02-24	2
P1A-06		T	A2	4	BIT 63	5	T2	B03-15	2
P1A-07		T	B2	3		6	F2	B02-14	4
			A3				T3		
			B3				F3		
			A4				T4		
			B4				F4		
			A5				T5		
			B5				F5		

12114 LOC: A02 NAME: RVH

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-12		T	A1	2	CODE	7	T1	A04-19	1
P1A-13		T	B1	1	BIT 68	8	F1	TERM	
P1A-10		T	A2	4	BIT 69	5	T2	A04-20	1
P1A-11		T	B2	3		6	F2	TERM	
P1A-02		T	A3	18	BIT 70	15	T3	A04-17	1
P1A-01		T	B3	17		16	F3	TERM	
P1A-04		T	A4	20	BIT 71	13	T4	A04-18	1
P1A-03		T	B4	19		14	F4	TERM	
			A5				T5		
			B5				F5		

12160 LOC: F02 NAME: B010

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G01-06	E02-18		A1	1	BIT 33	7	T1	E03-18	1
G01-14	F02-17		A2	2	BIT 35				
F01-08	E02-24		A3	24	BIT 37				
F02-20	E02-22		A4	22	BIT 39				
F01-12	E02-14		A5	23	BIT 41				
F02-13		T	A6	5	BIT 43				
E02-05		T	A7	4	BIT 45				
F02-15		T	A8	3	BIT 47				
			PI	6					

12160 LOC: F02 NAME: B011

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G01-16	E02-13		A1	18	BIT 34	11	T1	E03-01	1
F02-02		T	A2	17	BIT 36				
F01-06	E02-01		A3	16	BIT 38				
F01-16	F02-22		A4	20	BIT 39				
E02-19		T	A5	19	BIT 42				
E01-06	F02-05		A6	13	BIT 43				
E02-04		T	A7	14	BIT 46				
E02-03	F02-03		A8	15	BIT 47				
			PI	12					

12160 LOC: E02 NAME: B012

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G01-12	E02-16		A1	23	BIT 36	7	T1	E03-20	1
F02-24		T	A2	24	BIT 37				
F02-16		T	A3	1	BIT 38				
E02-20		T	A4	22	BIT 39				
E02-17		T	A5	2	BIT 44				
E01-14	F02-04		A6	5	BIT 45				
E01-12	F02-14		A7	4	BIT 46				
E02-15	F02-15		A8	3	BIT 47				
			PI	6					

12160 LOC: E02 NAME: B013

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F02-01		T	A1	18	BIT 33	11	T1	E03-19	1
F02-18		T	A2	13	BIT 34				
E02-23		T	A3	16	BIT 36				
F02-20	E02-22		A4	20	BIT 39				
F02-23		T	A5	14	BIT 41				
E01-08	F02-19		A6	19	BIT 42				
E01-16	E02-02		A7	17	BIT 44				
D01-08	E02-03		A8	15	BIT 47				
			PI	12					

12160 LOC: C02 NAME: B230

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D01-16	B02-18		A1	2	BIT 49	7	T1	C03-02	1
D01-12	C02-18		A2	1	BIT 51				
C01-06	B02-04		A3	4	BIT 53				
C02-20	B02-22		A4	22	BIT 55				
B02-16		T	A5	24	BIT 57				
C02-16		T	A6	3	BIT 59				
B02-23		T	A7	23	BIT 61				
C02-14		T	A8	5	BIT 63				
			PI	6					

12160 LOC: C02 NAME: B231

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D01-14	B02-19		A1	19	BIT 50	11	T1	C03-01	1
C02-01		T	A2	18	BIT 51				
C01-16	B02-02		A3	17	BIT 54				
C01-14	C02-22		A4	20	BIT 55				
B01-06	B02-13		A5	13	BIT 58				
B01-16	C02-03		A6	16	BIT 59				
B02-24		T	A7	15	BIT 62				
B02-05	C02-02		A8	14	BIT 63				
			PI	12					

12160 LOC: B02 NAME: B232

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C01-08	B02-15		A1	3	BIT 52	7	T1	C03-19	1
C02-04		T	A2	4	BIT 53				
C02-17		T	A3	2	BIT 54				
C02-22	B02-20		A4	22	BIT 55				
B02-17		T	A5	1	BIT 60				
B01-12	C02-23		A6	23	BIT 61				
A01-08	C02-15		A7	24	BIT 62				
B02-14	C02-14		A8	5	BIT 63				
			PI	6					

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION

7BWH ; A1V / 3W01

AD112 - C

DWG NO 60458190

REV J

SHEET CMC 4.7-00A

17-93

12160 LOC: B02 NAME: B233

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C02-02		T	A1	18	BIT 49	11	T1	C03-20	1
C02-19		T	A2	19	BIT 50				
B02-03		T	A3	15	BIT 52				
B02-22		T	A4	20	BIT 55				
B01-08	C02-24		A5	16	BIT 57				
C02-13		T	A6	13	BIT 58				
B01-14	B02-01		A7	17	BIT 60				
A01-06	B02-05		A8	14	BIT 63				
			P1	12					

12151 LOC: G04 NAME: RDA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F03-04		T	D1	19	DATA	12	T1	E05-03	2
					BIT 32	11	F1	TERM	
F03-02		T	D2	18	BIT 33	14	T2	E05-04	2
						13	F2	TERM	
F03-24		T	D3	1	BIT 34	6	T3	E05-23	2
						5	F3	TERM	
F03-23		T	D4	2	BIT 35	3	T4	E05-24	2
						4	F4	TERM	
F03-03		T	D5	17	BIT 36	16	T5	E05-05	2
						15	F5	TERM	
F03-05		T	D6	20	BIT 37	8	T6	E05-22	2
						7	F6	TERM	
D05-03		T	C1	24	NOTE: C1 FROM TOT2, PIN F1				
D03-02		T	C2	23	C2 FROM MCF, PIN T2				
			MS	22					

12151 LOC: F04 NAME: RDB

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F03-22		T	D1	20	DATA	8	T1	E05-01	2
					BIT 38	7	F1	TERM	
F03-01		T	D2	2	BIT 39	3	T2	E05-02	2
						4	F2	TERM	
F03-16		T	D3	17	BIT 40	16	T3	E05-15	2
						15	F3	TERM	
F03-20		T	D4	1	BIT 41	6	T4	E05-18	2
						5	F4	TERM	
F03-13		T	D5	18	BIT 42	14	T5	E05-14	2
						13	F5	TERM	
F03-19		T	D6	19	BIT 43	12	T6	E05-17	2
						11	F6	TERM	
D05-04		T	C1	24	NOTE: C1 FROM TOT2, PIN F2				
E03-23		T	C2	23	C2 FROM MCF, PIN T3				
			MS	22					

12151 LOC: E04 NAME: RDC

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F03-18		T	D1	20	DATA	8	T1	E05-16	2
					BIT 44	7	F1	TERM	
F03-17		T	D2	1	BIT 45	6	T2	E05-19	2
						5	F2	TERM	
F03-14		T	D3	19	BIT 46	12	T3	E05-13	2
						11	F3	TERM	
F03-15		T	D4	2	BIT 47	3	T4	E05-20	2
						4	F4	TERM	
B03-23		T	D5	18	BIT 48	14	T5	C05-05	2
						13	F5	TERM	
B03-03		T	D6	17	BIT 49	16	T6	C05-03	2
						15	F6	TERM	
D05-05		T	C1	24	NOTE: C1 FROM TOT2, PIN F4				
D03-07		T	C2	23	C2 FROM MCF, PIN T4				
			MS	22					

12151 LOC: C04 NAME: RDD

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B03-01		T	D1	20	DATA	8	T1	C05-01	2
					BIT 50	7	F1	TERM	
B03-02		T	D2	19	BIT 51	12	T2	C05-24	2
						11	F2	TERM	
B03-04		T	D3	18	BIT 52	14	T3	C05-23	2
						13	F3	TERM	
B03-22		T	D4	2	BIT 53	3	T4	C05-04	2
						4	F4	TERM	
B03-05		T	D5	17	BIT 54	16	T5	C05-22	2
						15	F5	TERM	
B03-24		T	D6	1	BIT 55	6	T6	C05-02	2
						5	F6	TERM	
D05-13		T	C1	24	NOTE: C1 FROM TOT2, PIN F5				
D03-11		T	C2	23	C2 FROM MCF, PIN T5				
			MS	22					

12151 LOC: B04 NAME: RDE

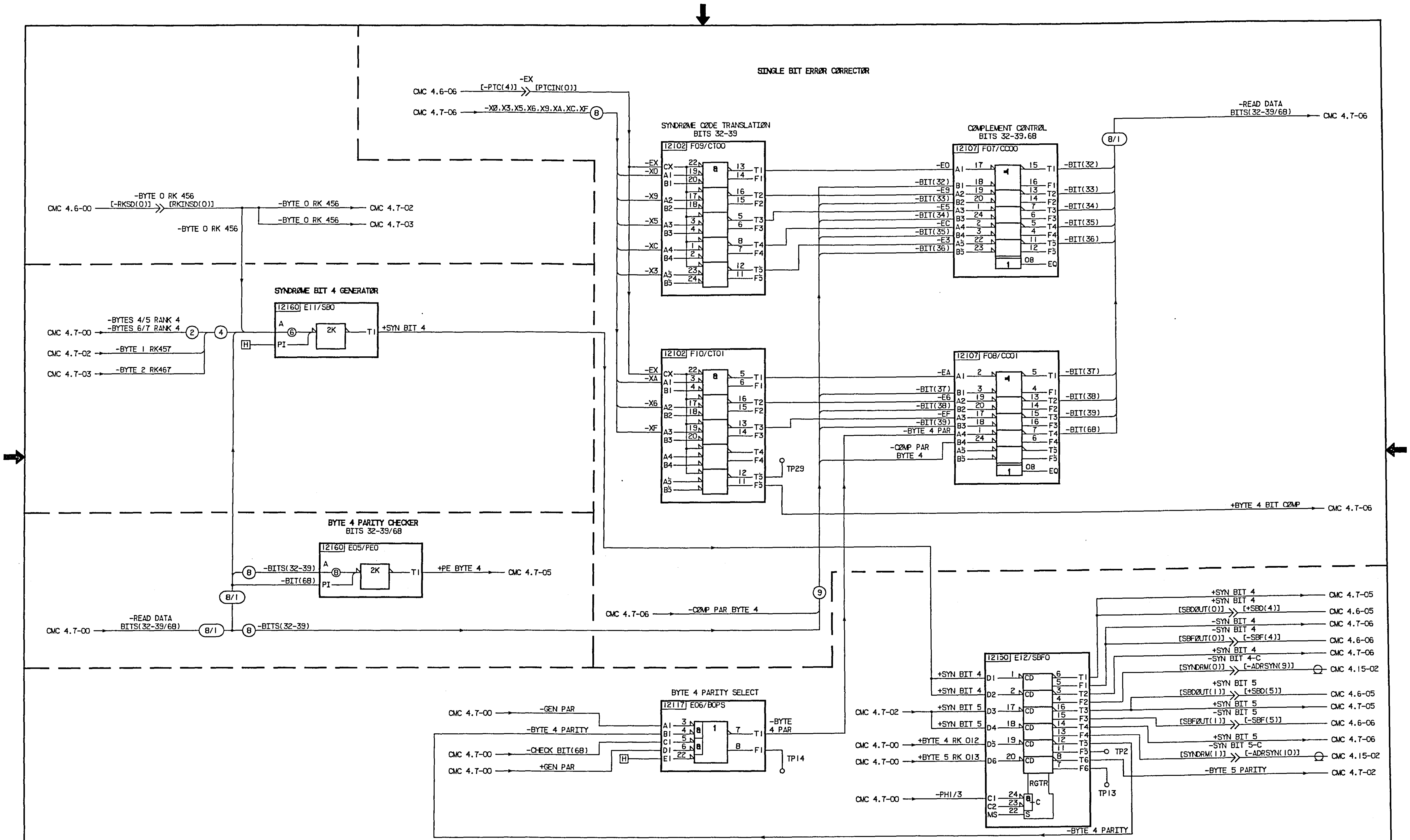
SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B03-18		T	D1	17	DATA	16	T1	C05-18	2
					BIT 56	15	F1	TERM	
B03-20		T	D2	2	BIT 57	3	T2	C05-16	2
						4	F2	TERM	
B03-19		T	D3	1	BIT 58	6	T3	C05-20	2
						5	F3	TERM	
B03-14		T	D4	20	BIT 59	8	T4	C05-19	2
						7	F4	TERM	
B03-13		T	D5	19	BIT 60	12	T5	C05-13	2
						11	F5	TERM	
B03-16		T	D6	18	BIT 61	14	T6	C05-15	2
						13	F6	TERM	
D05-16		T	C1	24	NOTE: C1 FROM TOT2, PIN F7				
D03-18		T	C2	23	C2 FROM MCF, PIN T7				
			MS	22					

12151 LOC: A04 NAME: RDF

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B03-17		T	D1	2	DATA	3	T1	C05-14	2
					BIT 62	4	F1	TERM	
B03-15		T	D2	1	DATA	6	T2	C05-17	2
					BIT 63	5	F2	TERM	
A02-07		T	D3	19	CODE	12	T3	E05-06	3
					BIT 68	11	F3	TERM	
A02-05		T	D4	20	CODE	8	T4	E05-12	3
					BIT 69	7	F4	TERM	
A02-15		T	D5	17	CODE	16	T5	C05-06	
					BIT 70	15	F5	TERM	
A02-13		T	D6	18	CODE	14	T6	C05-12	
					BIT 71	13	F6	TERM	
D05-15		T	C1	24	NOTE: C1 FROM TOT2, PIN F8				
D03-17		T	C2	23	C2 FROM MCF, PIN T8				
			MS	22					

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
7BWH; A1V/3W01
AD112-C

DWG NO 60458190
REV J
SHEET CMC 4.7-00B
17-94



NØTES:

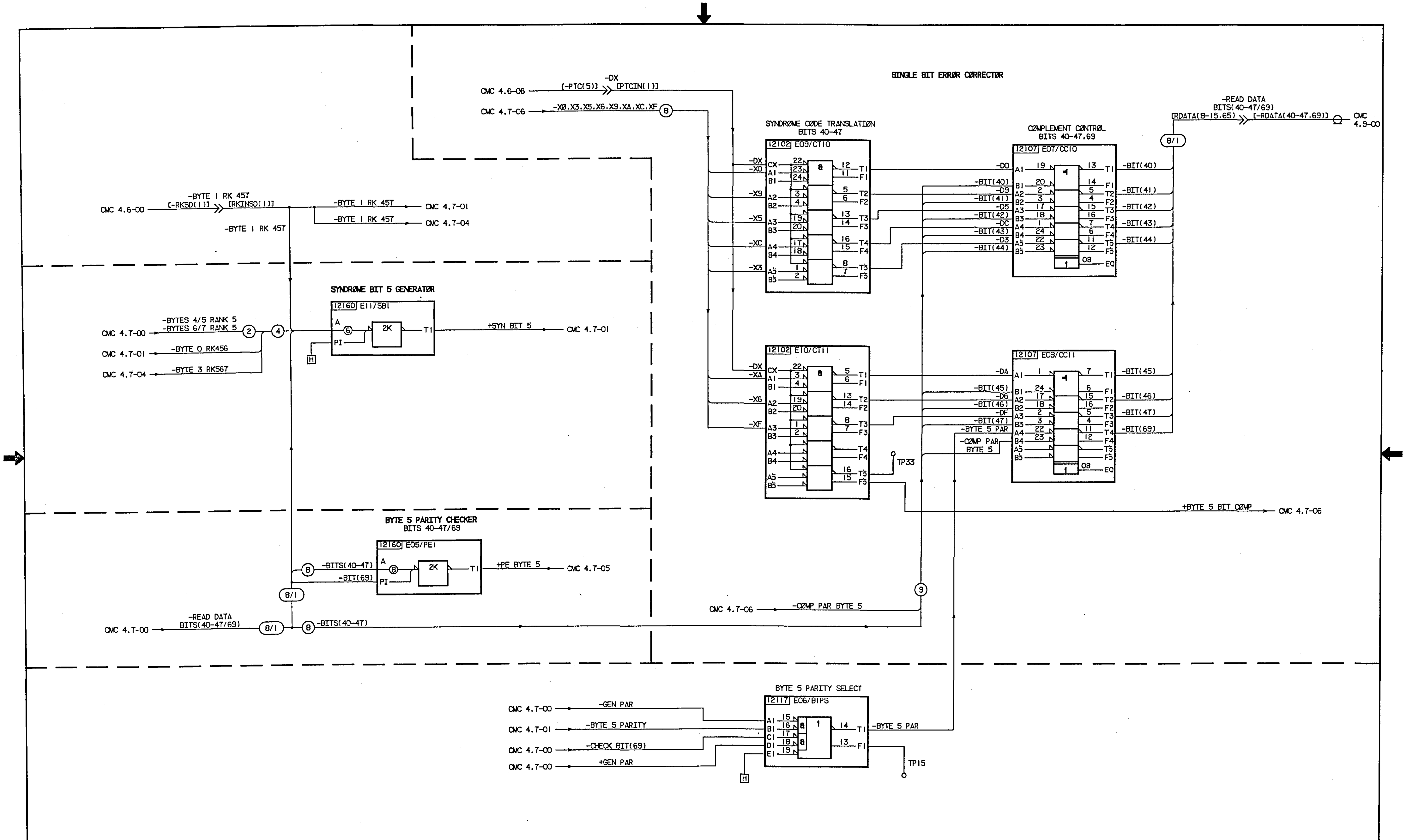
1. BACKUP CHART ØN CMC 4.7-04A.

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM - CMC 3.8
SYNDRØME BIT 4 GENERATØR; PARITY
CHECKER; SINGLE BIT 4 ERRØR
CØRRECTØR; BYTE 4.
7BWH;A1V/3W01
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.7-01	17-95



NØTES:

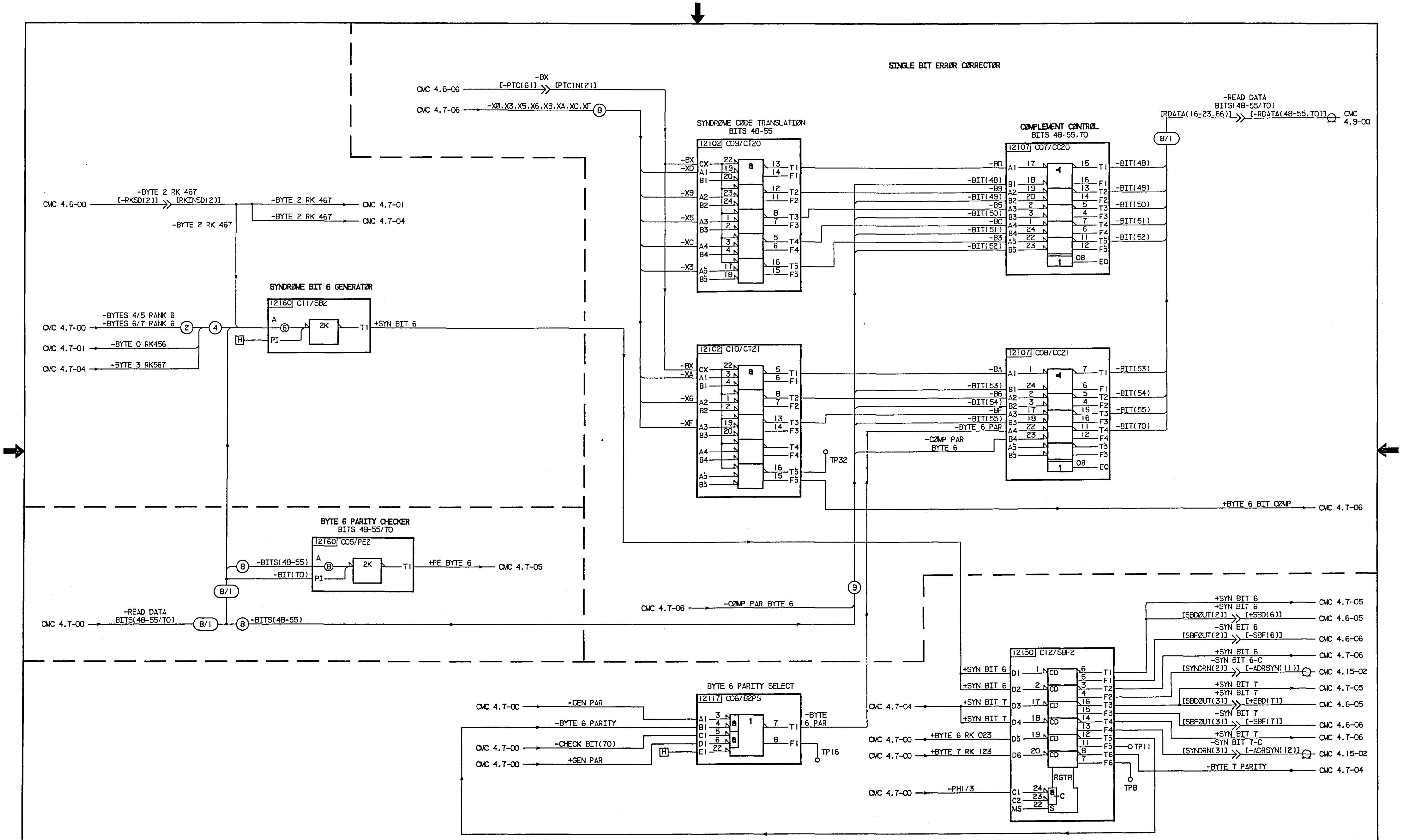
1. BACKUP CHART ØN CMC 4.7-04A.

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM - CMC 3.8
SYNDRØME BIT 5 GENERATØR, PARITY
CHECKER, SINGLE BIT 5 ERRØR
CØRRECTØR BYTE 5.
7BWH,A1V/3W01
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.7-02	17-96



NOTES:

1. BACKUP CHART ON CMC 4.7-04A.

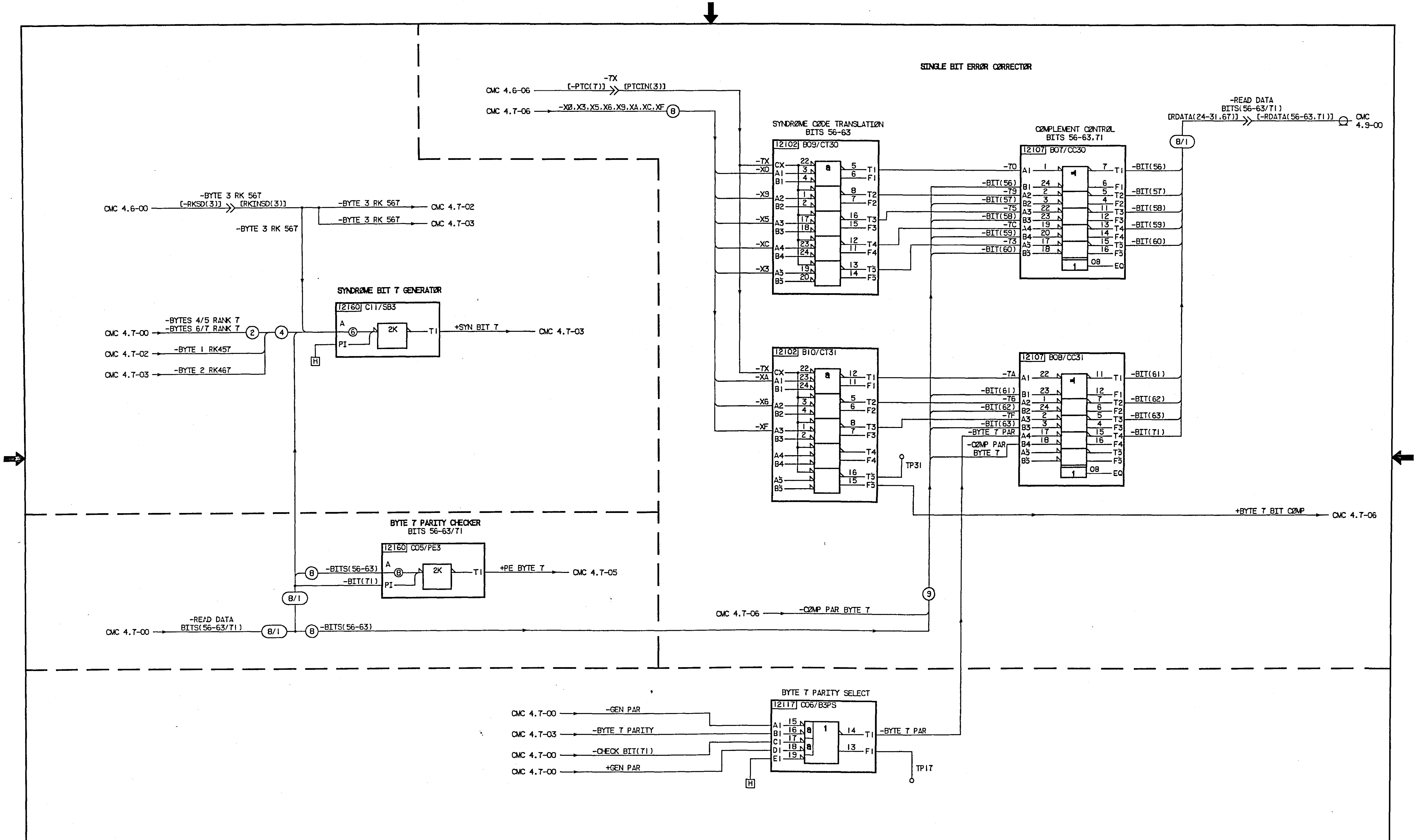
CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM - CMC 3.8
SYNDROME BIT 6 GENERATOR, PARITY
CHECKER, SINGLE BIT 6 ERROR
CORRECTOR, BYTE 6.
7BWH,A1V/3W01

AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.7-03	17-97



NOTES:

1. BACKUP CHART ON CMC 4.7-04A.

CONTROL DATA CORPORATION DEVELOPMENT DIVISION	LEVEL 4 DIAGRAM - CMC 3.8 SYNDROME BIT 7 GENERATOR, PARITY CHECKER, SINGLE BIT 7. ERROR CORRECTOR, BYTE 7. 7BWH,A1V/3W01 AD112-C	CODE IDENT	DWG NO 60458190	REV J
		SHEET CMC 4.7-04	PAGE 17-98	

12160 LOC: E11 NAME: SB0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E03-14		T	A1	18	BTS 4,5 RK4	11	T1	D12-23	3
C03-03		T	A2	17	BTS 6,7 RK4				
E11-01	C11-03		A3	16	BYTE 0 RK4				
E11-02	C11-15		A4	15	BYTE 1 RK4				
C11-19		T	A5	19	BYTE 2 RK4				
E06-05	P1B-11		A6	20	BIT 68				
			A7						
			A8						
			PI						

12160 LOC: E05 NAME: PE0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
G04-12	F07-18		A1	3	BIT 32	7	T1	B14-15	1
G04-14	F07-20		A2	4	BIT 33				
G04-06	F07-24		A3	23	BIT 34				
G04-03	F07-03		A4	24	BIT 35				
G04-16	F07-23		A5	5	BIT 36				
G04-08	F08-03		A6	22	BIT 37				
F04-08	F08-20		A7	1	BIT 38				
F04-03	F08-18		A8	2	BIT 39				
A04-12	E06-05		PI	6	BIT 68				

1. BYTE 0, LØGIC ØN CMC 4.7-01

12160 LOC: C11 NAME: SB2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E03-08		T	A1	5	BTS 4,5 RK6	7	T1	C20-1	3
C03-12		T	A2	4	BTS 6,7 RK6				
E11-16		T	A3	3	BYTE 0 RK6				
P1B-40	C11-19		A4	2	BYTE 2 RK6				
P1B-38	C11-20		A5	1	BYTE 3 RK6				
C06-05	P1B-19		A6	22	BIT 70				
			A7						
			A8						
			PI						

12160 LOC: C05 NAME: PE2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E04-14	C07-18		A1	5	BIT 48	7	T1	B14-17	1
E04-16	C07-20		A2	3	BIT 49				
C04-08	C07-03		A3	1	BIT 50				
C04-12	C07-24		A4	24	BIT 51				
C04-14	C07-23		A5	23	BIT 52				
C04-03	C08-24		A6	4	BIT 53				
C04-16	C08-03		A7	22	BIT 54				
C04-06	C08-18		A8	2	BIT 55				
A04-16	C06-05		PI	6	BIT 70				

1. BYTE 2, LØGIC ON CMC 4.7-03

12160 LOC: E11 NAME: SB1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E03-06		T	A1	4	BTS 4,5 RK5	7	T1	E12-17	3
C03-06		T	A2	5	BTS 6,7 RK5				
P2B-02	E11-16		A3	1	BYTE 0,RK5				
P2B-04	E11-15		A4	2	BYTE 1,RK5				
C11-20		T	A5	23	BYTE 3,RK5				
E06-17	P1B-15		A6	22	BIT 69				
			A7						
			A8						
			PI						

12160 LOC: E05 NAME: PE1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F04-16	E07-20		A1	15	BIT 40	11	T1	B14-16	1
F04-06	E07-03		A2	18	BIT 41				
F04-14	E07-18		A3	14	BIT 42				
F04-12	E07-24		A4	17	BIT 43				
E04-08	E07-23		A5	16	BIT 44				
E04-06	E08-24		A6	19	BIT 45				
E04-12	E08-18		A7	13	BIT 46				
E04-03	E08-03		A8	20	BIT 47				
A04-08	E06-17		PI	12	BIT 69				

1. BYTE 1, LØGIC ØN CMC 4.7-02

12160 LOC: C11 NAME: SB3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E03-12		T	A1	18	BTS 4,5 RK7	11	T1	C12-17	3
C03-08		T	A2	17	BTS 6,7 RK7				
E11-15		T	A3	15	BYTE 1,RK7				
C11-02	E11-19		A4	19	BYTE 2,RK7				
C11-01	E11-23		A5	20	BYTE 3,RK7				
C06-17	P1B-23		A6	14	BIT 71				
			A7						
			A8						
			PI						

12160 LOC: C05 NAME: PE3

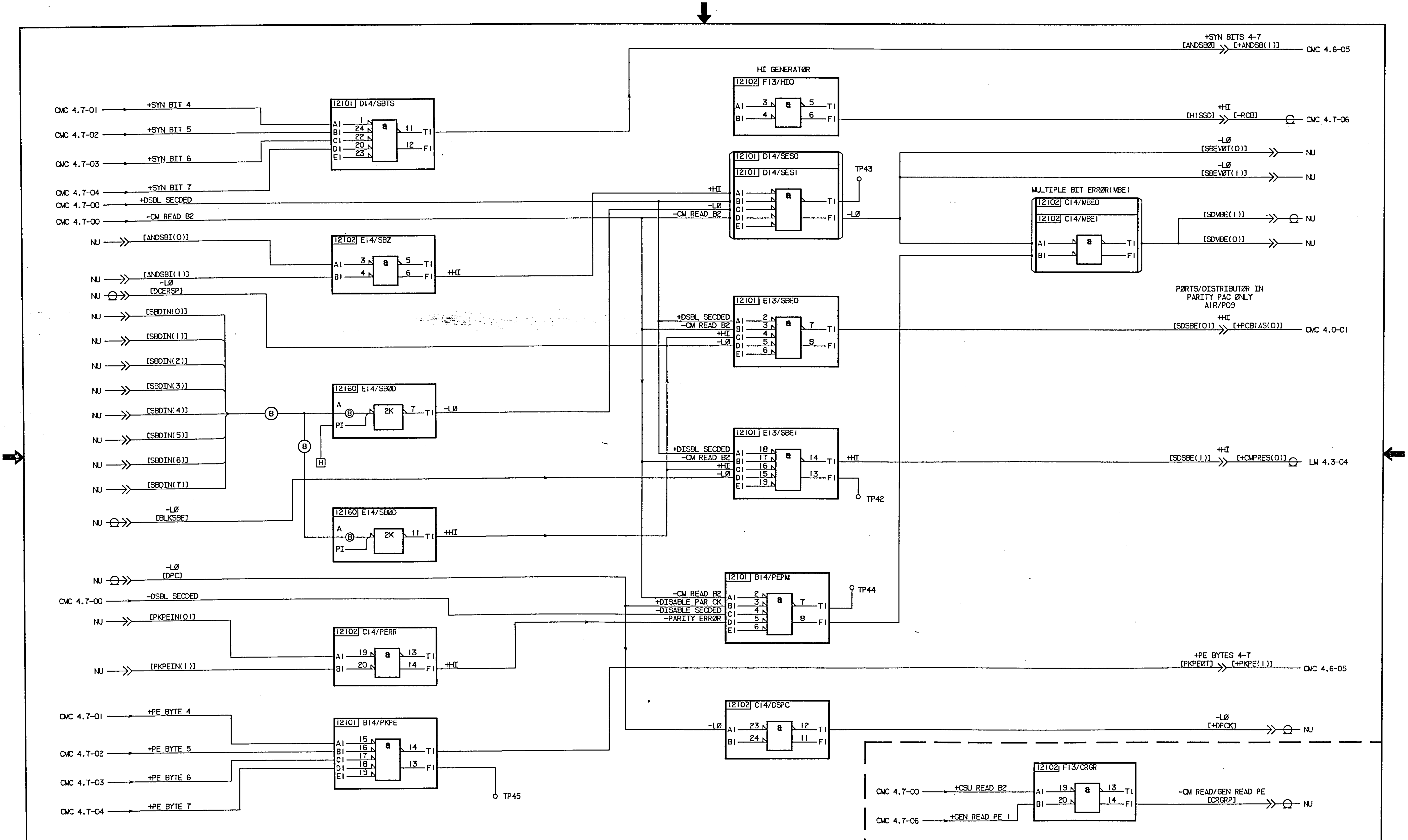
SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B04-16	B07-24		A1	18	BIT 56	11	T1	B14-18	1
B04-03	B07-03		A2	16	BIT 57				
B04-06	B07-23		A3	20	BIT 58				
B04-08	B07-20		A4	19	BIT 59				
B04-12	B07-18		A5	13	BIT 60				
B04-14	B08-23		A6	15	BIT 61				
A04-03	B08-24		A7	14	BIT 62				
A04-06	B08-03		A8	17	BIT 63				
A04-14	C06-17		PI	12	BIT 71				

1. BYTE 3, LØGIC ØN CMC 4.7-04

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.7-01, 4.7-02, 4.7-03, 4.7-04
7BWH; A1V/3W01
AD112-C

CODE IDENT		DWG NO	REV
34010	D	60458190	J
		SHEET CMC 4.7-04A	17-99



CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM - CMC 3.8
SYNDRØME TRANSLATØR.

TBWH:AIV/3W01

AD112-C

CODE IDENT	DWG NØ	REV
	60458190	J

SHEET	PAGE
CMC 4.7-05	17-100

12160 LOC: E14 NAME: SBEV

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E14-14		T	A1	4	NU	7	T1	D14-04	2
E14-19		T	A2	23	NU				
P2B-17	E14-20		A3	24	NU				
P2B-21	E14-17		A4	1	NU				
E14-13		T	A5	5	NU				
E14-18		T	A6	22	NU				
P2B-18	E14-15		A7	3	NU				
P2B-20	E14-16		A8	2	NU				
"BIAS 0"			P1	6	+ HI				

12160 LOC: E14 NAME: SB0D

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P2B-09	E14-04		A1	14	NU	11	T1	E13-16	2
P2B-13	E14-23		A2	19	NU				
E14-24		T	A3	20	NU				
E14-01		T	A4	17	NU				
P2B-08	E14-05		A5	13	NU				
P2B-12	E14-22		A6	18	NU				
E14-3		T	A7	15	NU				
E14-2		T	A8	16	NU				
			P1						

12101 LOC: D14 NAME: SESO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
C14-06	D14-02		A1	18		14	T1	TERM	1
D14-03	B14-02		B1	17		13	F1	C14-01	2
D14-04		T	C1	16					
D11-14	D14-05		D1	15					
			E1	19					

12101 LOC: D14 NAME: SES1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D14-18		T	A1	2		7	T1	TP-43	1
E13-17	D14-17		B1	3		8	F1	C14-17	2
E14-07	D14-16		C1	4					
D14-15	E13-18		D1	5					
			E1	6					

12102 LOC: C14 NAME: MBEO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D14-13	P2B-06		A1	1	MBE	8	T1	P1B-22	1
C14-18		T	B1	2		7	F1	TERM	

12102 LOC: C14 NAME: MBE1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D14-08	P2B-14		A1	17	MBE	16	T1	P1C-182	
B14-08	C14-02		B1	18		15	F1	TERM	

12101 LOC: E13 NAME: SBEO

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E13-18		T	A1	2		7	T1	P2B-22	1
P1C-170	E13-17		B1	3		8	F1	TERM	1
E13-16		T	C1	4					
P1C-169		T	D1	5					
			E1	6					

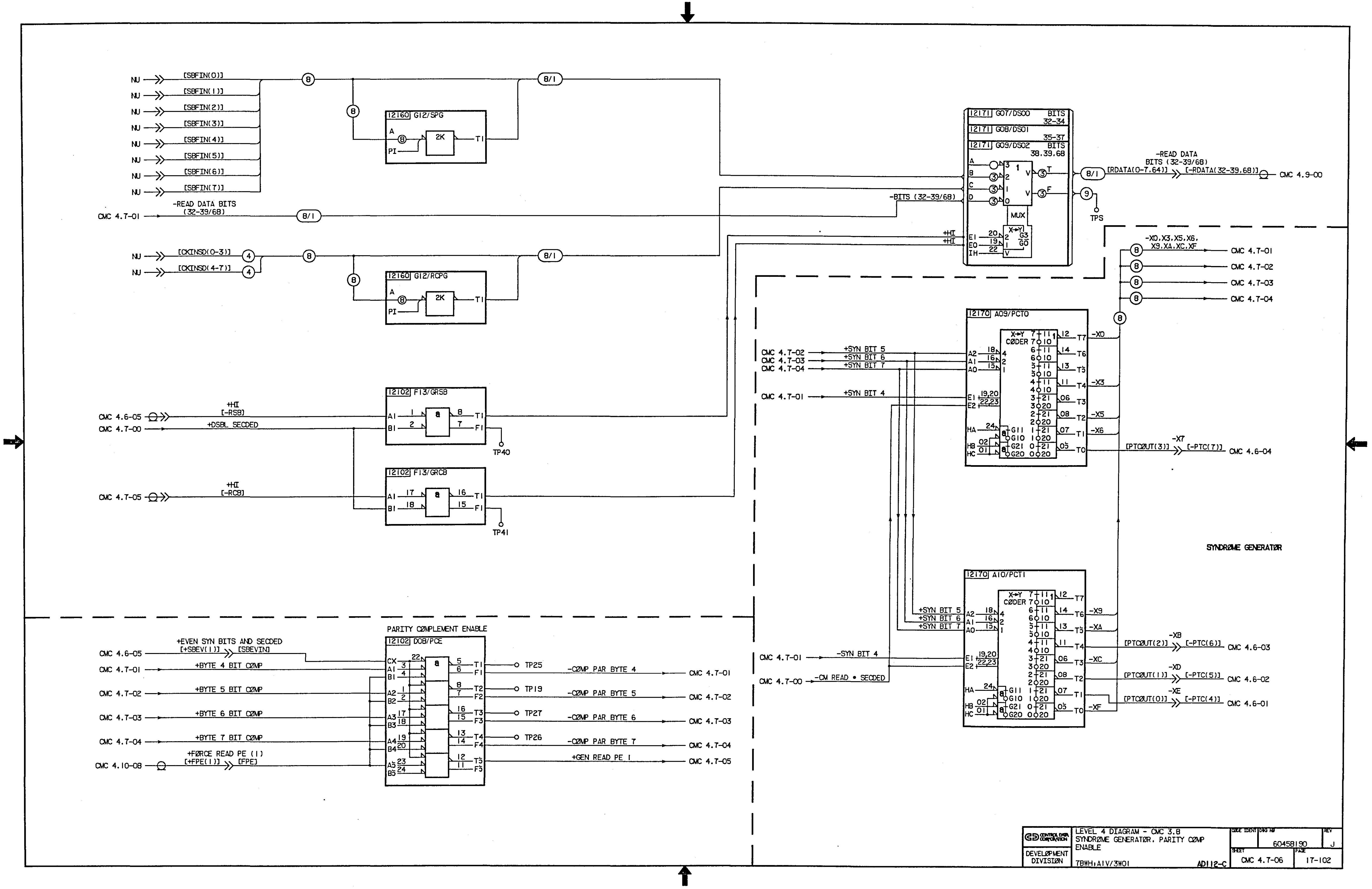
12101 LOC: E13 NAME: SBE1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D14-05	E13-02		A1	18		14	T1	P1C-165 •	1
E13-03	D14-03		B1	17		13	F1	TP-42	1
E14-11	E13-04		C1	16					
P1C-166		T	D1	15					
			E1	19					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
7BWH; A1V/3W01 AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.7-05A
17-101



CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM - CMC 3.8
SYNDROME GENERATOR, PARITY COMP
ENABLE

7BWH;A1V/3W01

AD112-C

CODE IDENT

DWG NO 60458190

REV J

SHEET CMC 4.7-06

PAGE 17-102

12160 LOC: G12 NAME: SPG

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P2B-27	G07-16		A1	1	NU	7	T1	G09-24	1
P2B-31	G07-24		A2	2	NU				
P2B-35	G07-04		A3	3	NU				
P2B-39	G08-16		A4	22	NU				
P2B-24	G08-24		A5	23	NU				
P2B-30	G08-04		A6	4	NU				
P2B-34	G09-16		A7	24	NU				
P2B-38	G09-04		A8	5	NU				
			PI		NU				

12160 LOC: G12 NAME: CPG

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P1B-09	G07-17		A1	13	NU	11	T1	G09-01	1
P1B-13	G07-01		A2	19	NU				
P1B-17	G07-05		A3	15	NU				
P1B-21	G08-17		A4	16	NU				
P1B-12	G08-01		A5	17	NU				
P1B-16	G08-05		A6	20	NU				
P1B-20	G09-17		A7	14	NU				
P1B-24	G09-05		A8	18	NU				
			PI		NU				

12171 LOC: G07 NAME: DS00

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	15	DATA	14	T1	PIC-59	1
G12-01		T	B1	16	BIT 32	13	F1	TP-21	1
G12-13		T	C1	17					
F07-15		T	D1	18					
			A2	23	DATA	11	T2	PIC-60	1
G12-02		T	B2	24	BIT 33	12	F2	TP-20	1
G12-19		T	C2	1					
F07-13		T	D2	2					
			A3	3	DATA	7	T3	PIC-63	1
G12-03		T	B3	4	BIT 34	8	F3	TP-18	1
G12-15		T	C3	5					
F07-07		T	D3	6					
G08-20		T	E1	20					
G08-19		T	E0	19					
			IH	22					

12171 LOC: G08 NAME: DS01

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	15	DATA	14	T1	PIC-64	1
G12-22		T	B1	16	BIT 35	13	F1	TP-24	1
G12-16		T	C1	17					
F07-05		T	D1	18					
			A2	23	DATA	11	T2	PIC-67	1
G12-23		T	B2	24	BIT 36	12	F2	TP-22	1
G12-17		T	C2	1					
F07-11		T	D2	2					
			A3	3	DATA	7	T3	PIC-68	1
G12-04		T	B3	4	BIT 37	8	F3	TP-23	1
G12-20		T	C3	5					
F08-05		T	D3	6					
G09-20	G07-20		E1	20					
G09-19	G07-19		E0	19					
			IH	22					

12171 LOC: G09 NAME: DS02

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	15	DATA	14	T1	PIC-71	1
G12-24		T	B1	16	BIT 38	13	F1	TP-34	1
G12-14		T	C1	17					
F08-13		T	D1	18					
			A2	3	DATA	7	T2	PIC-72	1
G12-05		T	B2	4	BIT 39	8	F2	TP-28	1
G12-18		T	C2	5					
F08-15		T	D2	6					
			A3	23	PARITY	11	T3	PIC-125	1
G12-07		T	B3	24	BIT 68	12	F3	TP-30	1
G12-11		T	C3	1					
F08-07		T	D3	2					
F13-08	G08-20		E1	20					
F13-16	G08-19		E0	19					
			IH	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
78WH: A1V/3W01 AD112-C

CODE IDENT 34010 D
DWG NO 60458190 REV J
SHEET 4.7-06A CMC 17-103

LEFT ZIF △1

BIT NAME		I/Ø	SHEET CMC 4.7-	TYPE	VIRTUAL PIN	REAL PIN
TRDATA (0)	TRDATA (32)	I	00	D	W00	P2A-33
FRDATA (0)	FRDATA (32)				24	32
(1)	(33)				01	35
(1)	(33)				25	34
(2)	(34)				02	31
(2)	(34)				26	30
(3)	(35)				03	38
(3)	(35)				27	37
(4)	(36)				04	39
(4)	(36)				28	40
(5)	(37)				05	28
(5)	(37)				29	29
(6)	(38)				06	26
(6)	(38)				2A	27
(7)	(39)				07	20
(7)	(39)				2B	19
(8)	(40)				08	22
(8)	(40)				2C	21
(9)	(41)				09	24
(9)	(41)				2D	23
(10)	(42)				0A	17
(10)	(42)				2E	18
(11)	(43)				0B	14
(11)	(43)				2F	15
(12)	(44)				0C	09
(12)	(44)				30	08
(13)	(45)				0D	11
(13)	(45)				31	10
(14)	(46)				0E	13
(14)	(46)				32	12
(15)	(47)				0F	06
(15)	(47)				33	07
(16)	(48)				10	03
(16)	(48)				34	P2A-04
(17)	(49)				11	P1A-38
(17)	(49)				35	37
(18)	(50)				12	40
(18)	(50)				36	P1A-39
(19)	(51)				13	P2A-02
(19)	(51)				37	P2A-01
(20)	(52)				14	P1A-34
(20)	(52)				38	35
(21)	(53)				15	32
(21)	(53)				39	33
(22)	(54)				16	27
(22)	(54)				3A	26
(23)	(55)				17	29
(23)	(55)				3B	28
(24)	(56)				18	31
(24)	(56)				3C	30
(25)	(57)				19	23
(25)	(57)				3D	24
(26)	(58)				1A	21
(26)	(58)				3E	22
(27)	(59)				1B	15
(27)	(59)				3F	14
(28)	(60)				1C	18
(28)	(60)				40	17
(29)	(61)				1D	20
(29)	(61)				41	19
(30)	(62)				1E	08
(30)	(62)				42	09
TRDATA (31)	TRDATA (63)				1F	06
FRDATA (31)	FRDATA (63)				43	07
TRDECC (0)	TRDECC (68)				20	12
FRDECC (0)	FRDECC (68)				44	13
(1)	(69)				21	10
(1)	(69)				45	11
(2)	(70)				22	02
(2)	(70)				46	01
TRDECC (3)	TRDECC (71)				23	04
FRDECC (3)	FRDECC (71)	I	00	D	W47	P1A-03

ZIF GRØUND PINS

P1A-05	P1A-25	P2A-05	P2A-25
P1A-16	P1A-36	P2A-16	P2A-36

CØAX △1

BIT NAME		I/Ø	SHEET CMC 4.7-	TYPE	VIRTUAL PIN	REAL PIN
BLK	CSRB	I	00	C	W4A	P1C-170
FPE	FPE (1)		06		74	56
MCK	NCLKN (417)		00		48	40
PHM	CLKPM (72)	I	00		49	52
RDATA (0)	RDATA (32)	Ø	06		80	59
(1)	(33)				81	60
(2)	(34)				82	63
(3)	(35)				83	64
(4)	(36)				84	67
(5)	(37)				85	68
(6)	(38)				86	71
(7)	(39)		06		87	72
(8)	(40)		02		88	75
(9)	(41)				89	76
(10)	(42)				8A	79
(11)	(43)				8B	80
(12)	(44)				8C	83
(13)	(45)				8D	84
(14)	(46)				8E	87
(15)	(47)		02		8F	88
(16)	(48)		03		90	91
(17)	(49)				91	92
(18)	(50)				92	97
(19)	(51)				93	98
(20)	(52)				94	101
(21)	(53)				95	102
(22)	(54)				96	105
(23)	(55)		03		97	106
(24)	(56)		04		98	109
(25)	(57)				99	110
(26)	(58)				9A	113
(27)	(59)				9B	114
(28)	(60)				9C	117
(29)	(61)				9D	118
(30)	(62)				9E	121
(31)	(63)		04		9F	122
(64)	(68)		06		A0	125
(65)	(69)		02		A1	126
(66)	(70)		03		A2	129
RDATA (67)	RDATA (71)		04		A3	130
SDMBE (1)	NU		05		A7	182
SDSBE (1)	CMPRES		05		A5	165
SYNDRM (0)	ADRSYN (9)		01		B8	150
(1)	(10)		02		B9	157
(2)	(11)		03		BA	149
SYNDRM (3)	ADRSYN (12)	Ø	04		BB	158
BLKSBE	NU	I	05		75	166
DPC	NU		05		4C	178
DSD	EC20FØ (3)		00		4B	142
RCB	HISSD		06		4E	174
RSB	HISSD	I	06		4D	173
HISSD	RCB	Ø	05		C4	162
CRGRP	NU	Ø			C5	185
DCERSP	NU	I			70	169
DPCK	NU	Ø	05	C	WCE	P1C-177

RIGHT ZIF △1

BIT NAME		I/Ø	SHEET CMC 4.7-	TYPE	VIRTUAL PIN	REAL PIN
RKINSD (0)	RKSD (0)	I	01	Z	W4F	P2B-02
(1)	(1)		02		50	P2B-04
(2)	(2)		03		51	P1B-40
RKINSD (3)	RKSD (3)		04		52	38
CKINSD (0)	NU		06		53	09
(1)					54	13
(2)					55	17
(3)					56	21
(4)					57	12
(5)					58	18
(6)					59	20
CKINSD (7)	NU				5A	P1B-24
SBEVIN	SBEV (1)		06		6F	P2B-10
PKPEIN (0)	NU		05		6D	P1B-03
PKPEIN (1)			05		6E	P1B-02
SBFIN (0)			06		63	P2B-27
(1)					64	31
(2)					65	35
(3)					65	39
(4)					66	24
(5)					67	30
(6)					68	34
SBFIN (7)			06		69	38
SBDIN (0)			05		6A	09
(1)					5B	13
(2)					5C	17
(3)					5D	21
(4)					5E	08
(5)					5F	12
(6)					60	18
SBDIN (7)					61	P2B-20
ANDBSI (0)					62	P1B-06
ANDBSI (1)	NU		05		6B	08
PTCIN (3)	PTC (3)		04		6C	28
(2)	(2)		03		73	30
(1)	(1)		02		72	32
PTCIN (0)	PTC (0)	I	01		71	P1B-34
RKØTSD (0)	RKSD (0)	Ø	00		70	P2B-01
(1)	(1)				A8	P2B-03
(2)	(2)				A9	P1B-39
RKØTSD (3)	RKSD (3)				AA	37
CKØTSD (0)	CKSD (4)				AB	11
(1)	(5)				AC	15
(2)	(6)				AD	19
CKØTSD (3)	CKSD (7)		00		AE	P1B-23
SBEVØT (0)	NU		05		AF	P2B-06
SBEVØT (1)					BE	P2B-14
SDMBE (0)	NU				BF	P1B-22
PKPEØT	PKPE (1)				A6	P1B-01
SDSBE (0)	PCBIAS (0)		05		BD	P2B-22
SBFØUT (0)	SBF (4)		01		A4	23
(1)	(5)		02		B4	29
(2)	(6)		03		B5	33
SBFØUT (3)	SBF (7)		04		B6	37
SBDØUT (0)	SBD (4)		01		B7	07
(1)	(5)		02		B0	11
(2)	(6)		03		B1	15
SBDØUT (3)	SBD (7)		04		B2	P2B-19
ANDSBØ	ANDSB (1)		05		B3	P1B-07
PTCØUT (3)	PTC (3)		06		BC	27
(2)	(2)				C2	29
(1)	(1)				C1	31
PTCØUT (0)	PTC (0)	Ø	06	Z	WC0	P1B-33

ZIF GRØUND PINS

P1B-05	P1B-25	P2B-05	P2B-25
P1B-16	P1B-36	P2B-16	P2B-36

NØTES:

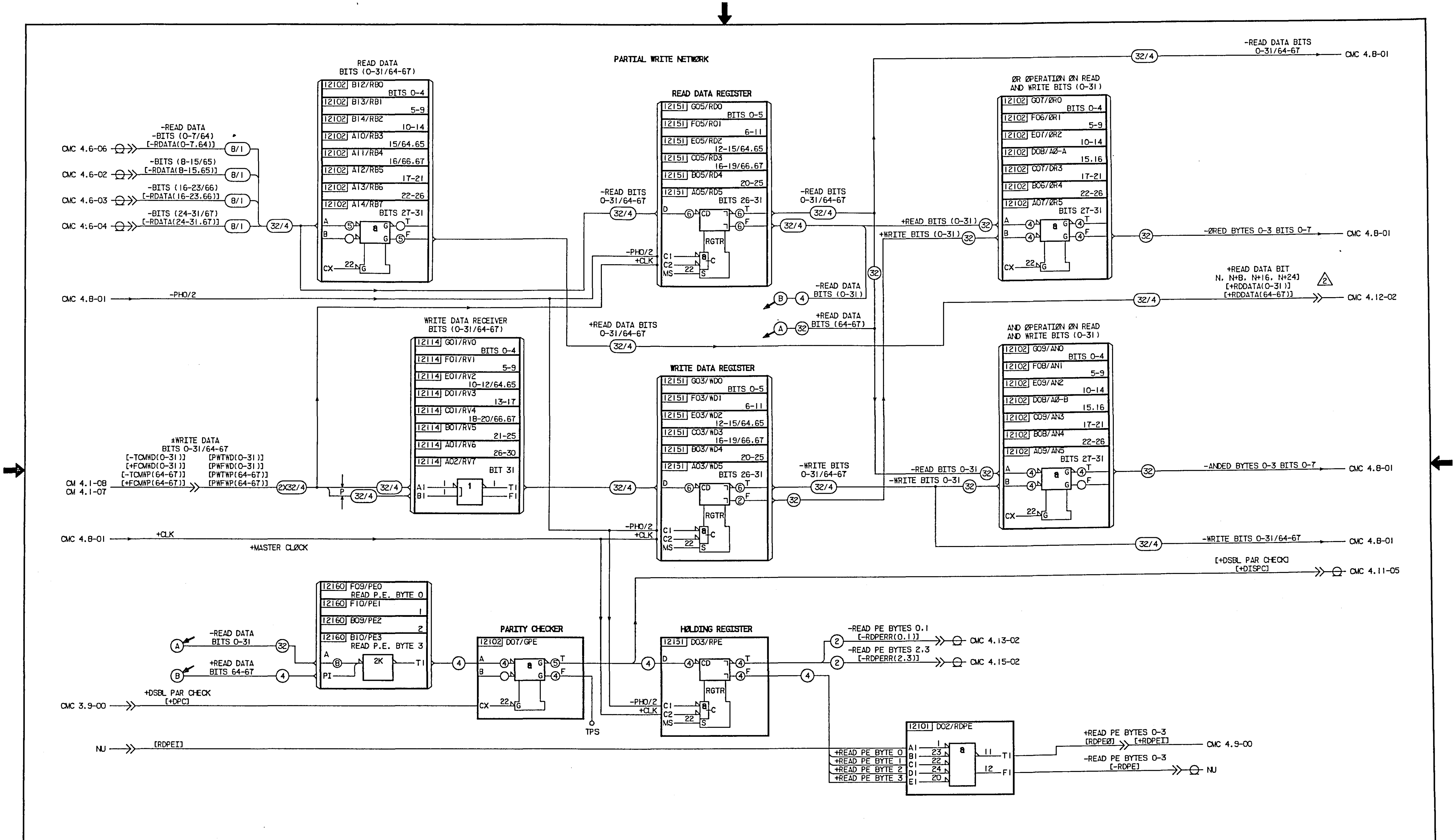
△1 CØNNECTØR TYPES

C = CØAX
D = DIFFERENTIAL
Z = ZIF TØ FØIL ØN INTERCØNNECT BØARD

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 CØNNECTØR CHART
SUPPLEMENTAL WIRING INFØRMATIØN
7BWH:3A1V/3W01
AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.7-CC
PAGE 17-104



NOTES:

1. BACKUP CHARTS ON CMC 4.8-00A-4.8-00D.
2. FANOUT TO 9 PAKS.

LENGTH 3 TO 7 INCHES.

CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.7
PARTIAL WRITE NETWORK, READ DATA
REGISTER, WRITE DATA REGISTER
7BXH,CIT/3X00

AD112-C

CODE IDENT

DWG NO 60458190

REV J

SHEET CMC 4.8-00

PAGE 17-105

12102 LOC: B12 NAME: RB0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-2		T	A1	3	READ	5	T1	TERM	
			B1	4	BIT 0	6	F1	PIB-40	
G5-1		T	A2	1	READ	8	T2	TERM	
			B2	2	BIT 1	7	F2	PIB-39	
G5-20		T	A3	23	READ	12	T3	TERM	
			B3	24	BIT 2	11	F3	PIB-38	
G5-19		T	A4	19	READ	13	T4	TERM	
			B4	20	BIT 3	14	F4	PIB-37	
G5-18		T	A5	17	READ	16	T5	TERM	
			B5	18	BIT 4	15	F5	PIB-35	
			CX	22					

12102 LOC: B13 NAME: RB1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-17		T	A1	3	READ	5	T1	TERM	
			B1	4	BIT 5	6	F1	PIB-34	
F5-2		T	A2	1	READ	8	T2	TERM	
			B2	2	BIT 6	7	F2	PIB-33	
F5-1		T	A3	23	READ	12	T3	TERM	
			B3	24	BIT 7	11	F3	PIB-32	
F5-20		T	A4	19	READ	13	T4	TERM	
			B4	20	BIT 8	14	F4	PIB-30	
F5-19		T	A5	17	READ	16	T5	TERM	
			B5	18	BIT 9	15	F5	PIB-29	
			CX	22					

12102 LOC: B14 NAME: RB2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F5-18		T	A1	3	READ	5	T1	TERM	
			B1	4	BIT 10	6	F1	PIB-28	
F5-17		T	A2	1	READ	8	T2	TERM	
			B2	2	BIT 11	7	F2	PIB-27	
E5-2		T	A3	23	READ	12	T3	TERM	
			B3	24	BIT 12	11	F3	PIB-26	
E5-1		T	A4	19	READ	13	T4	TERM	
			B4	20	BIT 13	14	F4	PIB-24	
E5-20		T	A5	17	READ	16	T5	TERM	
			B5	18	BIT 14	15	F5	PIB-23	
			CX	22					

12102 LOC: A10 NAME: RB3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E5-19		T	A1	3	READ	5	T1	TERM	
			B1	4	BIT 15	6	F1	PIB-22	
E5-18		T	A2	1	READ	8	T2	TERM	
			B2	2	BIT 64	7	F2	PIB-31	
E5-17		T	A3	23	READ	12	T3	TERM	
			B3	24	BIT 65	11	F3	PIB-21	
			A4	19		13	T4		
			B4	20		14	F4		
			A5	17		16	T5		
			B5	18		15	F5		
			CX	22					

12102 LOC: A11 NAME: RB4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C5-18		T	A1	3	READ	5	T1	TERM	
			B1	4	BIT 66	6	F1	PIB-11	
C5-17		T	A2	1	READ	8	T2	TERM	
			B2	2	BIT 67	7	F2	PIB-01	
C5-2		T	A3	23	READ	12	T3	TERM	
			B3	24	BIT 16	11	F3	PIB-20	
			A4	19		13	T4		
			B4	20		14	F4		
			A5	17		16	T5		
			B5	18		15	F5		
			CX	22					

12102 LOC: A12 NAME: RB5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C5-1		T	A1	3	READ	5	T1	TERM	
			B1	4	BIT 17	6	F1	PIB-19	
C5-20		T	A2	1	READ	8	T2	TERM	
			B2	2	BIT 18	7	F2	PIB-18	
C5-19		T	A3	23	READ	12	T3	TERM	
			B3	24	BIT 19	11	F3	PIB-17	
B5-2		T	A4	19	READ	13	T4	TERM	
			B4	20	BIT 20	14	F4	PIB-15	
B5-1		T	A5	17	READ	16	T5	TERM	
			B5	18	BIT 21	15	F5	PIB-14	
			CX	22					

12102 LOC: A13 NAME: RB6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B5-20		T	A1	3	READ	5	T1	TERM	
			B1	4	BIT 22	6	F1	PIB-13	
B5-19		T	A2	1	READ	8	T2	TERM	
			B2	2	BIT 23	7	F2	PIB-12	
B5-18		T	A3	23	READ	12	T3	TERM	
			B3	24	BIT 24	11	F3	PIB-10	
B5-17		T	A4	19	READ	13	T4	TERM	
			B4	20	BIT 25	14	F4	PIB-09	
A5-2		T	A5	17	READ	16	T5	TERM	
			B5	18	BIT 26	15	F5	PIB-08	
			CX	22					

12102 LOC: A14 NAME: RB7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A5-1		T	A1	3	READ	5	T1	TERM	
			B1	4	BIT 27	6	F1	PIB-07	
A5-20		T	A2	1	READ	8	T2	TERM	
			B2	2	BIT 28	7	F2	PIB-06	
A5-19		T	A3	23	READ	12	T3	TERM	
			B3	24	BIT 29	11	F3	PIB-04	
A5-18		T	A4	19	READ	13	T4	TERM	
			B4	20	BIT 30	14	F4	PIB-03	
A5-17		T	A5	17	READ	16	T5	TERM	
			B5	18	BIT 31	15	F5	PIB-02	
			CX	22					

12151 LOC: G05 NAME: RD0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-80	B12-3		D1	2	READ	3	T1	G9-1	3
					BIT 0	4	F1	G7-1	1
PIC-79	B12-1		D2	1	READ	6	T2	G9-3	3
					BIT 1	5	F2	G7-3	1
PIC-76	B12-23		D3	20	READ	8	T3	G9-17	3
					BIT 2	7	F3	G7-17	1
PIC-75	B12-19		D4	19	READ	12	T4	G9-19	3
					BIT 3	11	F4	G7-19	1
PIC-72	B12-17		D5	18	READ	14	T5	G9-23	3
					BIT 4	13	F5	G7-23	1
PIC-71	B13-3		D6	17	READ	16	T6	F8-1	3
					BIT 5	15	F6	F6-1	1
G3-24		T	C1	24	NOTE: C1 FROM TOT2, PIN F1				
G3-23		T	C2	23	C2 FROM MCF, PIN T2				
			MS	22					

12151 LOC: F05 NAME: RD1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-68	B13-1		D1	2	READ	3	T1	F8-3	3
					BIT 6	4	F1	F6-3	1
PIC-67	B13-23		D2	1	READ	6	T2	F8-17	3
					BIT 7	5	F2	F6-17	1
PIC-64	B13-19		D3	20	READ	8	T3	F8-19	3
					BIT 8	7	F3	F6-19	1
PIC-63	B13-17		D4	19	READ	12	T4	F8-23	3
					BIT 9	11	F4	F6-23	1
PIC-60	B14-3		D5	18	READ	14	T5	E9-1	3
					BIT 10	13	F5	E7-1	1
PIC-59	B14-1		D6	17	READ	16	T6	E9-3	3
					BIT 11	15	F6	E7-3	1
F3-24		T	C1	24	NOTE: C1 FROM TOT2, PIN F2				
F3-23		T	C2	23	C2 FROM MCF, PIN T2				
			MS	22					

12151 LOC: E05 NAME: RD2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-56	B14-23		D1	2	READ	3	T1	E9-17	3
					BIT 12	4	F1	E7-17	1
PIC-55	B14-19		D2	1	READ	6	T2	E9-19	3
					BIT 13	5	F2	E7-19	1
PIC-52	B14-17		D3	20	READ	8	T3	E9-23	3
					BIT 14	7	F3	E7-23	1
PIC-51	A10-3		D4	19	READ	12	T4	D8-17	3
					BIT 15	11	F4	D8-1	1
PIC-47	A10-1		D5	18	READ	14	T5	D6-3	2
					BIT 64	13	F5	F9-6	1
PIC-48	A10-23		D6	17	READ	16	T6	D6-24	2
					BIT 65	15	F6	F10-6	1
E3-24		T	C1	24	NOTE: C1 FROM TOT2, PIN F3				
E3-23		T	C2	23	C2 FROM MCF, PIN T3				
			MS	22					

12151 LOC: C05 NAME: RD3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-43	A11-23		D1	2	READ	3	T1	D8-19	3
					BIT 16	4	F1	D8-3	1
PIC-44	A12-03		D2	1	READ	6	T2	C9-1	3
					BIT 17	5	F2	C7-1	1
PIC-39	A12-1		D3	20	READ	8	T3	C9-3	3
					BIT 18	7	F3	C7-3	1
PIC-40	A12-23		D4	19	READ	12	T4	C9-17	3
					BIT 19	11	F4	C7-17	1
PIC-35	A11-3		D5	18	READ	14	T5	D6-18	2
					BIT 66	13	F5	B9-6	1
PIC-36	A11-1		D6	17	READ	16	T6	D6-20	2
					BIT 67	15	F6	B10-6	1
D5-3		T	C1	24	NOTE: C1 FROM TOT2, PIN F3				
C3-23		T	C2	23	C2 FROM MCF, PIN T3				
			MS	22					

12151 LOC: B05 NAME: RD4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-31	A12-19		D1	2	READ	3	T1	C9-19	3
					BIT 20	4	F1	C7-19	1
PIC-32	A12-17		D2	1	READ	6	T2	C9-23	3
					BIT 21	5	F2	C7-23	1
PIC-27	A13-3		D3	20	READ	8	T3	B8-1	3
					BIT 22	7	F3	B6-1	1
PIC-28	A13-1		D4	19	READ	12	T4	B8-3	3
					BIT 23	11	F4	B6-3	1
PIC-23	A13-23		D5	18	READ	14	T5	B8-17	3
					BIT 24	13	F5	B6-17	1
PIC-24	A13-19		D6	17	READ	16	T6	B8-19	3
					BIT 25	15	F6	B6-19	1
B3-24		T	C1	24	NOTE: C1 FROM TOT2, PIN F4				
B3-23		T	C2	23	C2 FROM MCF, PIN T4				
			MS	22					

12151 LOC: A05 NAME: RD5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-19	A13-17		D1	2	READ	3	T1	B8-23	
					BIT 26	4	F1	B6-23	
PIC-20	A14-3		D2	1	READ	6	T2	A9-1	
					BIT 27	5	F2	A7-1	
PIC-15	A14-1		D3	20	READ	8	T3	A9-3	
					BIT 28	7	F3	A7-3	
PIC-16	A14-23		D4	19	READ	12	T4	A9-17	
					BIT 29	11	F4	A7-17	
PIC-11	A14-19		D5	18	READ	14	T5	A9-19	
					BIT 30	13	F5	A7-19	
PIC-07	A14-17		D6	17	READ	16	T6	A9-23	
					BIT 31	15	F6	A7-23	
A3-24		T	C1	24	NOTE: C1 FROM TOT2, PIN F4				
A3-23		T	C2	23	C2 FROM MCF, PIN T4				
			MS	22					

12102 LOC: G7 NAME: ØR0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-4		T	A1	1	ØRED	8	T1	TERM	
G3-4		T	B1	2	BIT 0	7	F1	G8-19	2
G5-5		T	A2	3	ØRED	5	T2	TERM	
G3-5		T	B2	4	BIT 1	6	F2	G8-20	2
G5-7		T	A3	17	ØRED	16	T3	TERM	
G3-7		T	B3	18	BIT 2	15	F3	G8-14	2
G5-11		T	A4	19	ØRED	13	T4	TERM	
G3-11		T	B4	20	BIT 3	14	F4	G8-15	2
G5-13		T	A5	23	ØRED	12	T5	TERM	
G3-13		T	B5	24	BIT 4	11	F5	G8-13	2
			CX	22					

12102 LOC: F6 NAME: ØR1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-15		T	A1	1	ØRED	8	T1	TERM	
G3-15		T	B1	2	BIT 5	7	F1	G8-17	2
F5-4		T	A2	3	ØRED	5	T2	TERM	
F3-4		T	B2	4	BIT 6	6	F2	G8-18	2
F5-5		T	A3	17	ØRED	16	T3	TERM	
F3-5		T	B3	18	BIT 7	15	F3	G8-16	2
F5-7		T	A4	19	ØRED	13	T4	TERM	
F3-7		T	B4	20	BIT 8	14	F4	F7-14	2
F5-11		T	A5	23	ØRED	12	T5	TERM	
F3-11		T	B5	24	BIT 9	11	F5	F7-13	2
			CX	22					

12102 LOC: E7 NAME: ØR2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F5-13		T	A1	1	ØRED	8	T1	TERM	
F3-13		T	B1	2	BIT 10	7	F1	F7-15	2
F5-15		T	A2	3	ØRED	5	T2	TERM	
F3-15		T	B2	4	BIT 11	6	F2	F7-17	2
E5-4		T	A3	17	ØRED	16	T3	TERM	
E3-4		T	B3	18	BIT 12	15	F3	F7-18	2
E5-5		T	A4	19	ØRED	13	T4	TERM	
E3-5		T	B4	20	BIT 13	14	F4	F7-19	2
E5-7		T	A5	23	ØRED	12	T5	TERM	
E3-7		T	B5	24	BIT 14	11	F5	F7-16	2
			CX	22					

12102 LOC: D8 NAME: AØ

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E5-11		T	A1	1	ØRED	8	T1	TERM	
E3-11		T	B1	2	BIT 15	7	F1	F7-20	2
C5-4		T	A2	3	ØRED	5	T2	TERM	
C3-4		T	B2	4	BIT 16	6	F2	C8-3	2
E5-12	F10-2		A3	17	ANDED	16	T3	F11-14	2
E3-12	E14-23		B3	18	BIT 15	15	F3	TERM	
C5-3	B9-24		A4	19	ANDED	13	T4	D9-13	2
C3-3	D12-3		B4	20	BIT 16	14	F4	TERM	
			A5	23		12	T5		
			B5	24		11	F5		
			CX	22					

12102 LOC: C7 NAME: ØR3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C5-5		T	A1	1	ØRED	8	T1	TERM	
C3-5		T	B1	2	BIT 17	7	F1	C8-5	2
C5-7		T	A2	3	ØRED	5	T2	TERM	
C3-7		T	B2	4	BIT 18	6	F2	C8-4	2
C5-11		T	A3	17	ØRED	16	T3	TERM	
C3-11		T	B3	18	BIT 19	15	F3	C8-22	2
B5-4		T	A4	19	ØRED	13	T4	TERM	
B3-4		T	B4	20	BIT 20	14	F4	C8-23	2
B5-5		T	A5	23	ØRED	12	T5	TERM	
B3-5		T	B5	24	BIT 21	11	F5	C8-24	2
			CX	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.8-00
7BXH; CIT/3X00 AD112-C

CODE IDENT 34010 D
DWG NO 60458190
REV J
SHEET CMC 4.8-00A 17-106

12102 LOC: B6 NAME: ØR4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B5-7		T	A1	1	ØRED	8	T1	TERM	
B3-7		T	B1	2	BIT 22	7	F1	C8-1	2
B5-11		T	A2	3	ØRED	5	T2	TERM	
B3-11		T	B2	4	BIT 23	6	F2	C8-2	2
B5-13		T	A3	17	ØRED	16	T3	TERM	
B3-13		T	B3	18	BIT 24	15	F3	B7-19	2
B5-15		T	A4	19	ØRED	13	T4	TERM	
B3-15		T	B4	20	BIT 25	14	F4	B7-15	2
A5-4		T	A5	23	ØRED	12	T5	TERM	
A3-4		T	B5	24	BIT 26	11	F5	B7-20	2
			CX	22					

12102 LOC: A7 NAME: ØR5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A5-5		T	A1	1	ØRED	8	T1	TERM	
A3-5		T	B1	2	BIT 27	7	F1	B7-14	2
A5-7		T	A2	3	ØRED	5	T2	TERM	
A3-7		T	B2	4	BIT 28	6	F2	B7-13	2
A5-11		T	A3	17	ØRED	16	T3	TERM	
A3-11		T	B3	18	BIT 29	15	F3	B7-17	2
A5-13		T	A4	19	ØRED	13	T4	TERM	
A3-13		T	B4	20	BIT 30	14	F4	B7-18	2
A5-15		T	A5	23	ØRED	12	T5	TERM	
A3-15		T	B5	24	BIT 31	11	F5	B7-16	2
			CX	22					

12114 LOC: G01 NAME: RV0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-40			A1	2	WRITE	7	T1	G3-2	
P2A-39			B1	1	BIT 0	8	F1	TERM	
P2A-35			A2	4	WRITE	5	T2	G3-1	
P2A-34			B2	3	BIT 1	6	F2	TERM	
P2A-37			A3	24	WRITE	11	T3	G3-20	
P2A-38			B3	23	BIT 2	12	F3	TERM	
P2A-31			A4	18	WRITE	15	T4	G3-19	
P2A-30			B4	17	BIT 3	16	F4	TERM	
P2A-33			A5	20	WRITE	13	T5	G3-18	
P2A-32			B5	19	BIT 4	14	F5	TERM	

12114 LOC: F01 NAME: RV1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-28			A1	4	WRITE	5	T1	G3-17	
P2A-29			B1	3	BIT 5	6	F1	TERM	
P2A-27			A2	2	WRITE	7	T2	F3-2	
P2A-26			B2	1	BIT 6	8	F2	TERM	
P2A-23			A3	18	WRITE	15	T3	F3-1	
P2A-24			B3	17	BIT 7	16	F3	TERM	
P2A-20			A4	20	WRITE	13	T4	F3-20	
P2A-19			B4	19	BIT 8	14	F4	TERM	
P2A-22			A5	24	WRITE	11	T5	F3-19	
P2A-21			B5	23	BIT 9	12	F5	TERM	

12114 LOC: E01 NAME: RV2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-15			A1	2	WRITE	7	T1	F3-18	
P2A-14			B1	1	BIT 10	8	F1	TERM	
P2A-17			A2	4	WRITE	5	T2	F3-17	
P2A-18			B2	3	BIT 11	6	F2	TERM	
P2A-10			A3	18	WRITE	15	T3	E3-2	
P2A-11			B3	17	BIT 12	16	F3	TERM	
P2A-13			A4	24	WRITE	11	T4	E3-18	
P2A-12			B4	23	BIT 64	12	F4	TERM	
P2A-09			A5	20	WRITE	13	T5	E3-17	
P2A-08			B5	19	BIT 65	14	F5	TERM	

12114 LOC: D01 NAME: RV3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-04			A1	4	WRITE	5	T1	E3-1	
P2A-03			B1	3	BIT 13	6	F1	TERM	
P2A-06			A2	2	WRITE	7	T2	E3-20	
P2A-07			B2	1	BIT 14	8	F2	TERM	
P1A-40			A3	18	WRITE	15	T3	E3-19	
P1A-39			B3	17	BIT 15	16	F3	TERM	
P1A-38			A4	20	WRITE	13	T4	C3-2	
P1A-37			B4	19	BIT 16	14	F4	TERM	
P2A-02			A5	24	WRITE	11	T5	C3-1	
P2A-01			B5	23	BIT 17	12	F5	TERM	

12114 LOC: C01 NAME: RV4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-28			A1	18	WRITE	15	T1	C3-20	
P1A-29			B1	17	BIT 18	16	F1	TERM	
P1A-27			A2	20	WRITE	13	T2	C3-19	
P1A-26			B2	19	BIT 19	14	F2	TERM	
P1A-31			A3	24	WRITE	11	T3	B3-2	
P1A-30			B3	23	BIT 20	12	F3	TERM	
P1A-34			A4	2	WRITE	7	T4	C3-18	
P1A-35			B4	1	BIT 66	8	F4	TERM	
P1A-33			A5	4	WRITE	5	T5	C3-17	
P1A-32			B5	3	BIT 67	6	F5	TERM	

12114 LOC: B01 NAME: RV5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-23			A1	2	WRITE	7	T1	B3-1	
P1A-24			B1	1	BIT 21	8	F1	TERM	
P1A-21			A2	4	WRITE	5	T2	B3-20	
P1A-22			B2	3	BIT 22	6	F2	TERM	
P1A-17			A3	20	WRITE	13	T3	B3-19	
P1A-18			B3	19	BIT 23	14	F3	TERM	
P1A-15			A4	18	WRITE	15	T4	B3-18	
P1A-14			B4	17	BIT 24	16	F4	TERM	
P1A-20			A5	24	WRITE	11	T5	B3-17	
P1A-19			B5	23	BIT 25	12	F5	TERM	

12114 LOC: A01 NAME: RV6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-12			A1	2	WRITE	7	T1	A3-2	
P1A-13			B1	1	BIT 26	8	F1	TERM	
P1A-10			A2	4	WRITE	5	T2	A3-1	
P1A-11			B2	3	BIT 27	6	F2	TERM	
P1A-08			A3	24	WRITE	11	T3	A3-20	
P1A-09			B3	23	BIT 28	12	F3	TERM	
P1A-07			A4	20	WRITE	13	T4	A3-19	
P1A-06			B4	19	BIT 29	14	F4	TERM	
P1A-01			A5	18	WRITE	15	T5	A3-18	
P1A-02			B5	17	BIT 30	16	F5	TERM	

12114 LOC: A02 NAME: RV7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-04			A1	18	WRITE	15	T1	A3-17	
P1A-03			B1	17	BIT 31	16	F1	TERM	
			A2	2		7	T2		
			B2	1		8	F2		
			A3	4		5	T3		
			B3	3		6	F3		
			A4	24		11	T4		
			B4	23		12	F4		
			A5	20		13	T5		
			B5	19		14	F5		

12151 LOC: G03 NAME: WD0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G1-7		T	D1	2	WRITE	3	T1	G9-2	2
					BIT 0	4	F1	G7-2	1
G1-5		T	D2	1	WRITE	6	T2	G9-4	2
					BIT 1	5	F2	G7-4	1
G1-11		T	D3	20	WRITE	8	T3	G9-18	2
					BIT 2	7	F3	G7-18	1
G1-15		T	D4	19	WRITE	12	T4	G9-20	2
					BIT 3	11	F4	G7-20	1
G1-13		T	D5	18	WRITE	14	T5	G9-24	2
					BIT 4	13	F5	G7-24	1
F1-5		T	D6	17	WRITE	16	T6	F8-2	2
					BIT 5	15	F6	F6-2	1
D5-4	G5-24		C1	24	NOTE: C1 FROM TOT2, PIN F5				
E4-8	G5-23		C2	23	C2 FROM MCF, PIN T5				
			MS	22					

12151 LOC: F03 NAME: WD1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F1-7		T	D1	2	WRITE	3	T1	F8-4	2
					BIT 6	4	F1	F6-4	1
F1-15		T	D2	1	WRITE	6	T2	F8-18	2
					BIT 7	5	F2	F6-18	1
F1-13		T	D3	20	WRITE	8	T3	F8-20	2
					BIT 8	7	F3	F6-20	1
F1-11		T	D4	19	WRITE	12	T4	F8-24	2
					BIT 9	11	F4	F6-24	1
E1-7		T	D5	18	WRITE	14	T5	E9-2	2
					BIT 10	13	F5	E7-2	1
E1-5		T	D6	17	WRITE	16	T6	E9-4	2
					BIT 11	15	F6	E7-4	1
D5-6	F5-24		C1	24	NOTE: C1 FROM TOT2, PIN F5				
E4-7	F5-23		C2	23	C2 FROM MCF, PIN T5				
			MS	22					

12151 LOC: E03 NAME: WD2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E1-15		T	D1	2	WRITE	3	T1	E9-18	2
					BIT 12	4	F1	E7-18	1
D1-5		T	D2	1	WRITE	6	T2	E9-20	2
					BIT 13	5	F2	E7-20	1
D1-7		T	D3	20	WRITE	8	T3	E9-24	2
					BIT 14	7	F3	E7-24	1
D1-15		T	D4	19	WRITE	12	T4	D8-18	2
					BIT 15	11	F4	D8-2	1
E1-11		T	D5	18	WRITE	14	T5	D6-2	2
					BIT 64	13	F5	TERM	
E1-13		T	D6	17	WRITE	16	T6	D6-1	2
					BIT 65	15	F6	TERM	
D5-15	E5-24		C1	24	NOTE: C1 FROM TOT2, PIN F6				
E4-2	E5-23		C2	23	C2 FROM MCF, PIN T6				
			MS	22					

12151 LOC: C03 NAME: WD3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D1-13		T	D1	2	WRITE	3	T1	D8-20	2
					BIT 16	4	F1	D8-4	1
D1-11		T	D2	1	WRITE	6	T2	C9-2	2
					BIT 17	5	F2	C7-2	1
C1-15		T	D3	20	WRITE	8	T3	C9-4	2
					BIT 18	7	F3	C7-4	1
C1-13		T	D4	19	WRITE	12	T4	C9-18	2
					BIT 19	11	F4	C7-18	1
C1-7		T	D5	18	WRITE	14	T5	D6-17	2
					BIT 66	13	F5	TERM	
C1-5		T	D6	17	WRITE	16	T6	D6-19	2
					BIT 67	15	F6	TERM	
D5-13		T	C1	24	NOTE: C1 FROM TOT2, PIN F6				
E4-12	C5-23		C2	23	C2 FROM MCF, PIN T6				
			MS	22					

12151 LOC: B03 NAME: WD4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C1-11		T	D1	2	WRITE	3	T1	C9-20	2
					BIT 20	4	F1	C7-20	1
B1-7		T	D2	1	WRITE	6	T2	C9-24	2
					BIT 21	5	F2	C7-24	1
B1-5		T	D3	20	WRITE	8	T3	B8-2	2
					BIT 22	7	F3	B6-2	1
B1-13		T	D4	19	WRITE	12	T4	B8-4	2
					BIT 23	11	F4	B6-4	1
B1-15		T	D5	18	WRITE	14	T5	B8-18	2
					BIT 24	13	F5	B6-18	1
B1-11		T	D6	17	WRITE	16	T6	B8-20	2
					BIT 25	15	F6	B6-20	1
D5-14	B5-24		C1	24	NOTE: C1 FROM TOT2, PIN F7				
E4-17	B5-23		C2	23	C2 FROM MCF, PIN T7				
			MS	22					

12151 LOC: A03 NAME: WD5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A1-7		T	D1	2	WRITE	3	T1	B8-24	2
					BIT 26	4	F1	B6-24	1
A1-5		T	D2	1	WRITE	6	T2	A9-2	2
					BIT 27	5	F2	A7-2	1
A1-11		T	D3	20	WRITE	8	T3	A9-4	2
					BIT 28	7	F3	A7-4	1
A1-13		T	D4	19	WRITE	12	T4	A9-18	2
					BIT 29	11	F4	A7-18	1
A1-15		T	D5	18	WRITE	14	T5	A9-20	2
					BIT 30	13	F5	A7-20	1
A2-15		T	D6	17	WRITE	16	T6	A9-24	2
					BIT 31	15	F6	A7-24	1
D5-16	A5-24		C1	24	NOTE: C1 FROM TOT2, PIN F7				
E4-11	A5-23		C2	23	C2 FROM MCF, PIN T7				
			MS	22					

12102 LOC: G9 NAME: AN0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-3	F9-1		A1	1	ANDED	8	T1	G10-4	2
G3-3	G13-3		B1	2	BIT 0	7	F1	TERM	
G5-6	F9-3		A2	3	ANDED	5	T2	G10-5	2
G3-6	G13-23		B2	4	BIT 1	6	F2	TERM	
G5-8	F9-2		A3	17	ANDED	16	T3	G10-22	2
G3-8	G13-15		B3	18	BIT 2	15	F3	TERM	
G5-12	F9-24		A4	19	ANDED	13	T4	G10-2	2
G3-12	G14-3		B4	20	BIT 3	14	F4	TERM	
G5-14	F9-23		A5	23	ANDED	12	T5	G10-3	2
G3-14	G14-23		B5	24	BIT 4	11	F5	TERM	
			CX	22					

12102 LOC: F8 NAME: AN1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-16	F9-4		A1	1	ANDED	8	T1	G10-23	2
G3-16	G14-15		B1	2	BIT 5	7	F1	TERM	
F5-3	F9-5		A2	3	ANDED	5	T2	G10-1	2
F3-3	F13-3		B2	4	BIT 6	6	F2	TERM	
F5-6	F9-22		A3	17	ANDED	16	T3	G10-24	2
F3-6	F13-23		B3	18	BIT 7	15	F3	TERM	
F5-8	F10-24		A4	19	ANDED	13	T4	F11-19	2
F3-8	F14-3		B4	20	BIT 8	14	F4	TERM	
F5-12	F10-23		A5	23	ANDED	12	T5	F11-20	2
F3-12	F14-23		B5	24	BIT 9	11	F5	TERM	
			CX	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.8-00
7BXH; CIT/3X00 AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.8-00B
17-107

12102 LOC: E9 NAME: AN2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F5-14	F10-22		A1	1	ANDED	8	T1	F11-18	2
F3-14	F14-15		B1	2	BIT 10	7	F1	TERM	
F5-16	F10-1		A2	3	ANDED	5	T2	F11-17	2
F3-16	E13-3		B2	4	BIT 11	6	F2	TERM	
E5-3	F10-5		A3	17	ANDED	16	T3	F11-16	2
E3-3	E13-23		B3	18	BIT 12	15	F3	TERM	
E5-6	F10-4		A4	19	ANDED	13	T4	F11-15	2
E3-6	E13-15		B4	20	BIT 13	14	F4	TERM	
E5-8	F10-3		A5	23	ANDED	12	T5	F11-13	2
E3-8	E14-3		B5	24	BIT 14	11	F5	TERM	
			CX	22					

12102 LOC: C9 NAME: AN3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C5-6	B9-3		A1	1	ANDED	8	T1	D9-14	2
C3-6	D12-23		B1	2	BIT 17	7	F1	TERM	
C5-8	B9-5		A2	3	ANDED	5	T2	D9-17	2
C3-8	D12-15		B2	4	BIT 18	6	F2	TERM	
C5-12	B9-4		A3	17	ANDED	16	T3	D9-18	2
C3-12	D13-3		B3	18	BIT 19	15	F3	TERM	
B5-3	B9-1		A4	19	ANDED	13	T4	D9-16	2
B3-3	D13-23		B4	20	BIT 20	14	F4	TERM	
B5-6	B9-2		A5	23	ANDED	12	T5	D9-15	2
B3-6	D13-15		B5	24	BIT 21	11	F5	TERM	
			CX	22					

12102 LOC: B8 NAME: AN4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B5-8	B9-23		A1	1	ANDED	8	T1	D9-20	2
B3-8	D14-3		B1	2	BIT 22	7	F1	TERM	
B5-12	B9-22		A2	3	ANDED	5	T2	D9-19	2
B3-12	D14-23		B2	4	BIT 23	6	F2	TERM	
B5-14	B10-3		A3	17	ANDED	16	T3	B11-13	2
B3-14	C12-3		B3	18	BIT 24	15	F3	TERM	
B5-16	B10-4		A4	19	ANDED	13	T4	B11-14	2
B3-16	C12-23		B4	20	BIT 25	14	F4	TERM	
A5-3	B10-5		A5	23	ANDED	12	T5	B11-15	2
A3-3	C12-15		B5	24	BIT 26	11	F5	TERM	
			CX	22					

12102 LOC: A9 NAME: AN5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A5-6	B10-2		A1	1	ANDED	8	T1	B11-16	2
A3-6	C13-3		B1	2	BIT 27	7	F1	TERM	
A5-8	B10-1		A2	3	ANDED	5	T2	B11-20	2
A3-8	C13-23		B2	4	BIT 28	6	F2	TERM	
A5-12	B10-23		A3	17	ANDED	16	T3	B11-19	2
A3-12	C13-15		B3	18	BIT 29	15	F3	TERM	
A5-14	B10-22		A4	19	ANDED	13	T4	B11-18	2
A3-14	C14-3		B4	20	BIT 30	14	F4	TERM	
A5-16	B10-24		A5	23	ANDED	12	T5	B11-17	2
A3-16	C14-23		B5	24	BIT 31	11	F5	TERM	
			CX	22					

12160 LOC: F09 NAME: PE0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
G9-1	G13-6		A1	1	BIT 0	7	T1	D7-1	
G9-3	G13-2		A2	3	BIT 1				
G9-17	G13-18		A3	2	BIT 2				
G9-19	G14-6		A4	24	BIT 3				
G9-23	G14-2		A5	23	BIT 4				
F8-1	G14-18		A6	4	BIT 5				
F8-3	F13-6		A7	5	BIT 6				
F8-17	F13-2		A8	22	BIT 7				
E5-13		T	P1	6	BIT 64				

12160 LOC: F10 NAME: PE1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F8-19	F14-6		A1	24	BIT 8	7	T1	D7-3	
F8-23	F14-2		A2	23	BIT 9				
E9-1	F14-18		A3	22	BIT 10				
E9-3	E13-6		A4	1	BIT 11				
E9-17	E13-2		A5	5	BIT 12				
E9-19	E13-18		A6	4	BIT 13				
E9-23	E14-6		A7	3	BIT 14				
D8-17	E14-2		A8	2	BIT 15				
E5-15		T	P1	6	BIT 65				

12160 LOC: B09 NAME: PE2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D8-19	D12-6		A1	24	BIT 16	7	T1	D7-17	
C9-1	D12-2		A2	3	BIT 17				
C9-3	D12-18		A3	5	BIT 18				
C9-17	D13-6		A4	4	BIT 19				
C9-19	D13-2		A5	1	BIT 20				
C9-23	D13-18		A6	2	BIT 21				
B8-1	D14-6		A7	23	BIT 22				
B8-3	D14-2		A8	22	BIT 23				
C5-13		T	P1	6	BIT 66				

12160 LOC: B10 NAME: PE3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B8-17	C12-6		A1	3	BIT 24	7	T1	D7-19	
B8-19	C12-2		A2	4	BIT 25				
B8-23	C12-18		A3	5	BIT 26				
A9-1	C13-6		A4	2	BIT 27				
A9-3	C13-2		A5	1	BIT 28				
A9-17	C13-18		A6	23	BIT 29				
A9-19	C14-6		A7	22	BIT 30				
A9-23	C14-2		A8	24	BIT 31				
C5-15		T	P1	6	BIT 67				

12102 LOC: D07 NAME: GPE

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F9-7		T	A1	1	RD PE	8	T1	D3-19	1
			B1	2	BYTE 0	7	F1	TP-03	
F10-7		T	A2	3	RD PE	5	T2	D3-18	1
			B2	4	BYTE 1	6	F2	TP-04	
B9-7		T	A3	17	RD PE	16	T3	D3-20	1
			B3	18	BYTE 2	15	F3	TP-09	
B10-7		T	A4	19	RD PE	13	T4	D3-17	1
			B4	20	BYTE 3	14	F4	TP-08	
			A5	23	◆ DISABLE	12	T5	PIC-88	
			B5	24	PAR CK	11	F5	TERM	
PIC-92		T	CX	22					

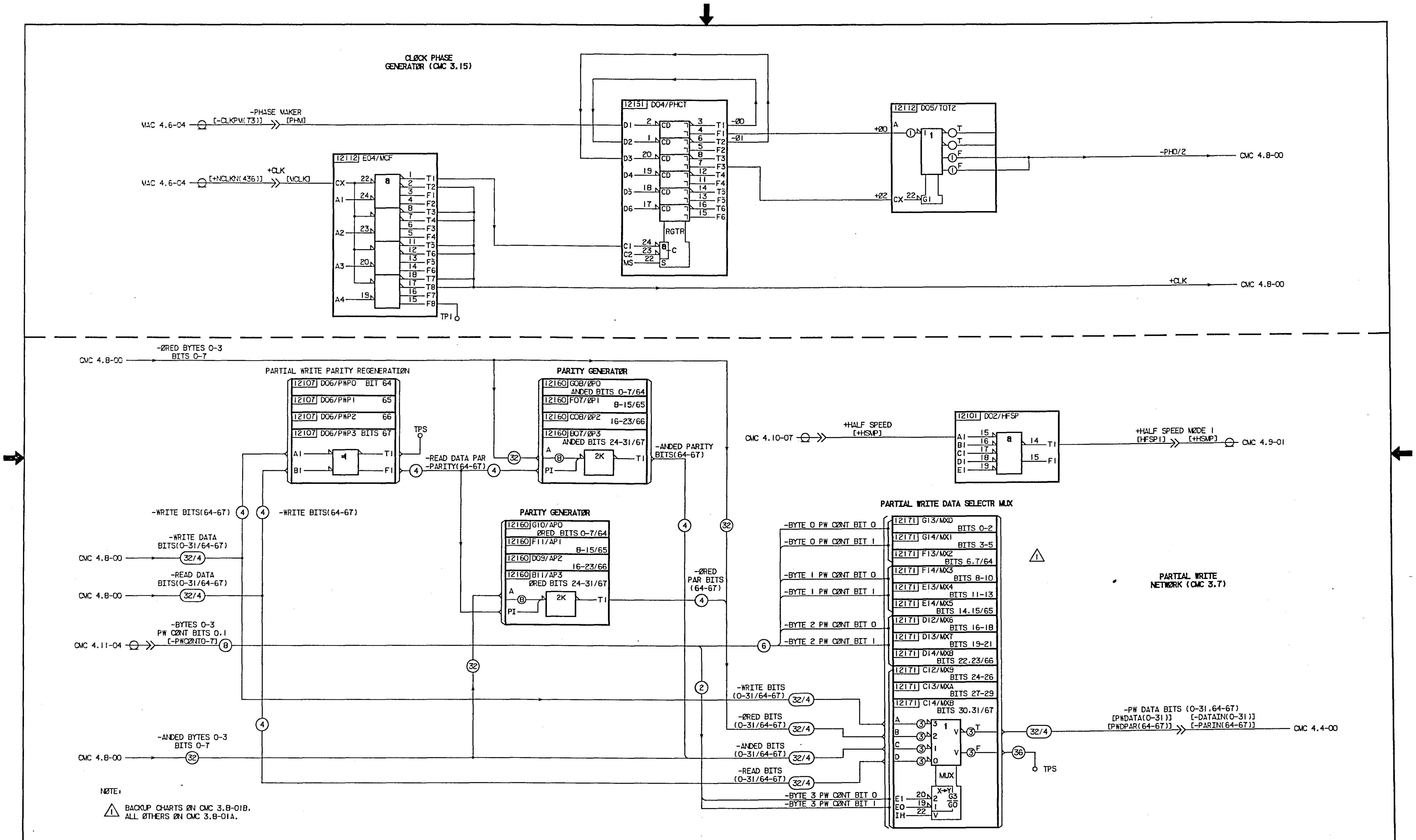
12151 LOC: D03 NAME: RPE

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D7-8		T	D1	19	RDPE	12	T1	PIC-03	
					BYTE 0	11	F1	D2-23	
D7-5		T	D2	18	RDPE	14	T2	PIC-84	
					BYTE 1	13	F2	D2-22	
D7-16		T	D3	20	RDPE	8	T3	PIC-08	
					BYTE 2	7	F3	D2-24	
D7-13		T	D4	17	RDPE	16	T4	PIC-04	
					BYTE 3	15	F4	D2-20	
			D5	1		6	T5		
						5	F5		
			D6	2		3	T6		
						4	F6		
D5-5		T	C1	24					
E4-18		T	C2	23					
			MS	22					

FOIL LENGTH RESTRICTIONS ON SHEETS 4.8-00 & 4.8-01:

1. FOIL A PLUS F PLUS J PLUS K = 16 INCHES MAX
2. FOIL B PLUS E PLUS I PLUS K = 16 INCHES MAX
3. FOIL C PLUS E PLUS I PLUS K = 16 INCHES MAX
4. FOIL D PLUS F PLUS J PLUS K = 16 INCHES MAX
5. FOIL G PLUS L PLUS I PLUS K = 16 INCHES MAX
6. FOIL G PLUS M PLUS J PLUS K = 16 INCHES MAX
7. FOIL H PLUS L PLUS I PLUS K = 16 INCHES MAX
8. FOIL H PLUS M PLUS J PLUS K = 16 INCHES MAX
9. FOIL P PLUS Q = 16 INCHES MAX

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS
LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.8-00
7BXH: CIT/3X00 AD112-C
CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.8-00C
17-108



NOTE:

⚠ BACKUP CHARTS ON CMC 3.8-01B.
ALL OTHERS ON CMC 3.8-01A.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM - CMC 3.7, 3.15
PARTIAL WRITE NETWORK;
CLOCK PHASE GENERATOR
TBXH;CIT/3X00

AD112-C

CODE IDENT	DWG NO	REV
	60458150	J
SHEET		PAGE
CMC 4.8-01		17-109

12160 LOC: G08 NAME: 0P0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
G7-7	G13-4		A1	19	0RED BIT 0	11	T1	F13-17	
G7-6	G13-24		A2	20	0RED BIT 1				
G7-15	G13-16		A3	14	0RED BIT 2				
G7-14	G14-4		A4	15	0RED BIT 3				
G7-11	G14-24		A5	13	0RED BIT 4				
F6-7	G14-16		A6	17	0RED BIT 5				
F6-6	F13-4		A7	18	0RED BIT 6				
F6-15	F13-24		A8	16	0RED BIT 7				
D6-4	G10-6		P1	12	PAR 64				

12160 LOC: F07 NAME: 0P1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F6-14	F14-4		A1	14	0RED BIT 8	11	T1	E14-17	
F6-11	F14-24		A2	13	0RED BIT 9				
E7-7	F14-16		A3	15	0RED BIT 10				
E7-6	E13-4		A4	17	0RED BIT 11				
E7-15	E13-24		A5	18	0RED BIT 12				
E7-14	E13-16		A6	19	0RED BIT 13				
E7-11	E14-4		A7	16	0RED BIT 14				
D8-7	E14-24		A8	20	0RED BIT 15				
D6-6	F11-12		P1	12	PAR 65				

12160 LOC: C08 NAME: 0P2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D8-6	D12-4		A1	3	0RED BIT 16	7	T1	D14-17	
C7-7	D12-24		A2	5	0RED BIT 17				
C7-6	D12-16		A3	4	0RED BIT 18				
C7-15	D13-4		A4	22	0RED BIT 19				
C7-10	D13-24		A5	23	0RED BIT 20				
C7-11	D13-16		A6	24	0RED BIT 21				
B6-7	D14-4		A7	1	0RED BIT 22				
B6-6	D14-24		A8	2	0RED BIT 23				
D6-16	D9-12		P1	6	PAR 66				

12160 LOC: B07 NAME: 0P3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B6-15	C12-4		A1	19	0RED BIT 24	11	T1	C14-17	
B6-14	C12-24		A2	15	0RED BIT 25				
B6-11	C12-16		A3	20	0RED BIT 26				
A7-7	C13-4		A4	14	0RED BIT 27				
A7-6	C13-24		A5	13	0RED BIT 28				
A7-15	C13-16		A6	17	0RED BIT 29				
A7-14	C14-4		A7	18	0RED BIT 30				
A7-11	C14-24		A8	16	0RED BIT 31				
D6-14	B11-12		P1	12	PAR 67				

12107 LOC: D06 NAME: PWP0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E3-14	F13-15		A1	2	PAR 64	5	T1	TP-02	
E5-14	F13-18		B1	3		4	F1	G8-12	2

12107 LOC: D06 NAME: PWP1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E3-16	E14-15		A1	1	PAR 65	7	T1	TP-06	
E5-16	E14-18		B1	24		6	F1	F7-12	2

12107 LOC: D06 NAME: PWP2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C3-14	D14-15		A1	17	PAR 66	15	T1	TP-05	
C5-14	D14-18		B1	18		16	F1	C8-6	2

12107 LOC: D06 NAME: PWP3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C3-16	C14-15		A1	18	PAR 67	13	T1	TP-07	
C5-16	C14-18		B1	20		14	F1	B7-12	2

12160 LOC: G10 NAME: AP0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
G9-8	G13-5		A1	4	AND BIT 0	7	T1	F13-16	
G9-5	G13-1		A2	5	AND BIT 1				
G9-16	G13-17		A3	22	AND BIT 2				
G9-13	G14-5		A4	2	AND BIT 3				
G9-12	G14-1		A5	3	AND BIT 4				
F8-8	G14-17		A6	23	AND BIT 5				
F8-5	F13-5		A7	1	AND BIT 6				
F8-16	F13-1		A8	24	AND BIT 7				
G8-17		T	P1	6	PAR 64				

12160 LOC: F11 NAME: AP1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F8-13	F14-5		A1	19	AND BIT 8	11	T1	E14-16	
F8-12	F14-1		A2	20	AND BIT 9				
E9-8	F14-17		A3	18	AND BIT 10				
E9-5	E13-5		A4	17	AND BIT 11				
E9-16	E13-1		A5	16	AND BIT 12				
E9-13	E13-17		A6	15	AND BIT 13				
E9-12	E14-5		A7	13	AND BIT 14				
D8-16	E14-1		A8	14	AND BIT 15				
F7-12		T	P1	12	PAR 65				

12160 LOC: D09 NAME: AP2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D8-13	D12-5		A1	13	AND BIT 16	11	T1	D14-16	
C9-8	D12-1		A2	14	AND BIT 17				
C9-5	D12-17		A3	17	AND BIT 18				
C9-16	D13-5		A4	18	AND BIT 19				
C9-13	D13-1		A5	16	AND BIT 20				
C9-12	D13-17		A6	15	AND BIT 21				
B8-8	D14-5		A7	20	AND BIT 22				
B8-5	D14-1		A8	19	AND BIT 23				
C8-6		T	P1	12	PAR 66				

12160 LOC: B11 NAME: AP3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B8-16	C12-5		A1	13	AND BIT 24	11	T1	C14-16	
B8-13	C12-1		A2	14	AND BIT 25				
B8-12	C12-17		A3	15	AND BIT 26				
A9-8	C13-5		A4	16	AND BIT 27				
A9-5	C13-1		A5	20	AND BIT 28				
A9-16	C13-17		A6	19	AND BIT 29				
A9-13	C14-5		A7	18	AND BIT 30				
A9-12	C14-1		A8	17	AND BIT 31				
B7-12		T	P1	12	PAR 67				

12112 LOC: D05 NAME: TOT2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D4-4	D5-23		A1	24	0(0,2)	1	T1	TERM	
						2	T2	TERM	
						3	F1	C5-24	1
						4	F2	G3-24	2
D5-24	D5-20		A2	23	0(0,2)	8	T3	TERM	
						7	T4	TERM	
						6	F3	F3-24	2
						5	F4	D3-24	1
D5-23	D5-19		A3	20	0(0,2)	11	T5	TERM	
						12	T6	TERM	
						13	F5	C3-24	1
						14	F6	B3-24	2
D5-20		T	A4	19	0(0,2)	18	T7	TERM	
						17	T8	TERM	
						16	F7	A3-24	2
						15	F8	E3-24	2
D4-7		T	CX	22					

12171 LOC: G13 NAME: MX0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G9-2		T	A1	3	PW BIT 0	7	T1	P2B-40	
G8-19		T	B1	4		8	F1	TP-45	
G10-4		T	C1	5					
F9-1		T	D1	6					
G9-4		T	A2	23	PW BIT 1	11	T2	P2B-39	
G8-20		T	B2	24		12	F2	TP-19	
G10-5		T	C2	1					
F9-3		T	D2	2					
G9-18		T	A3	15	PW BIT 2	14	T3	P2B-38	
G8-14		T	B3	16		13	F3	TP-29	
G10-22		T	C3	17					
F9-2		T	D3	18					
G14-20	F13-20		E1	20					
G14-19	F13-19		E0	19					
			IH	22					

12171 LOC: G14 NAME: MX1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G9-20		T	A1	3	PW BIT 3	7	T1	P2B-37	
G8-19		T	B1	4		8	F1	TP-28	
G10-2		T	C1	5					
F9-24		T	D1	6					
G9-24		T	A2	23	PW BIT 4	11	T2	P2B-35	
G8-13		T	B2	24		12	F2	TP-44	
G10-3		T	C2	1					
F9-23		T	D2	2					
F8-2		T	A3	15	PW BIT 5	14	T3	P2B-34	
G8-17		T	B3	16		13	F3	TP-43	
G10-23		T	C3	17					
F9-4		T	D3	18					
PIC-174	G13-20		E1	20					
PIC-173	G13-19		E0	19					
			IH	22					

12171 LOC: F13 NAME: MX2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F8-4		T	A1	3	PW BIT 6	7	T1	P2B-33	
G8-18		T	B1	4		8	F1	TP-15	
G10-1		T	C1	5					
F9-5		T	D1	6					
F8-18		T	A2	23	PW BIT 7	11	T2	P2B-32	
G8-16		T	B2	24		12	F2	TP-16	
G10-24		T	C2	1					
F9-22		T	D2	2					
D6-2		T	A3	15	PW BIT 64	14	T3	P2B-31	
G10-7		T	B3	16		13	F3	TP-33	
G8-11		T	C3	17					
D6-3		T	D3	18					
G13-20		T	E1	20					
G13-19		T	E0	19					
			IH	22					

12171 LOC: F14 NAME: MX3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F8-20		T	A1	3	PW BIT 8	7	T1	P2B-30	
F7-14		T	B1	4		8	F1	TP-23	
F11-19		T	C1	5					
F10-24		T	D1	6					
F8-24		T	A2	23	PW BIT 9	11	T2	P2B-29	
F7-13		T	B2	24		12	F2	TP-21	
F11-20		T	C2	1					
F10-23		T	D2	2					
F9-2		T	A3	15	PW BIT 10	14	T3	P2B-28	
F7-15		T	B3	16		13	F3	TP-42	
F11-18		T	C3	17					
F10-22		T	D3	18					
PIC-178	E14-20		E1	20					
PIC-177	E14-19		E0	19					
			IH	22					

12171 LOC: E13 NAME: MX4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E9-4		T	A1	3	PW BIT 11	7	T1	P2B-27	
F7-17		T	B1	4		8	F1	TP-31	
F11-17		T	C1	5					
F10-1		T	D1	6					
E9-18		T	A2	23	PW BIT 12	11	T2	P2B-26	
F7-18		T	B2	24		12	F2	TP-26	
F11-16		T	C2	1					
F10-5		T	D2	2					
E9-20		T	A3	15	PW BIT 13	14	T3	P2B-24	
F7-19		T	B3	16		13	F3	TP-41	
F11-19		T	C3	17					
F10-4		T	D3	18					
E14-20		T	E1	20					
E14-19		T	E0	19					
			IH	22					

12171 LOC: E14 NAME: MX5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E9-24		T	A1	3	PW BIT 14	7	T1	P2B-23	
F7-16		T	B1	4		8	F1	TP-20	
F11-13		T	C1	5					
F10-3		T	D1	6					
D8-18		T	A2	23	PW BIT 15	11	T2	P2B-22	
F7-20		T	B2	24		12	F2	TP-14	
F11-14		T	C2	1					
F10-2		T	D2	2					
D6-1		T	A3	15	PW BIT 65	14	T3	P2B-21	
F11-11		T	B3	16		13	F3	TP-12	
F7-11		T	C3	17					
D6-24		T	D3	18					
F14-20	E13-20		E1	20					
F14-19	E13-19		E0	19					
			IH	22					

12171 LOC: D12 NAME: MX6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D8-20		T	A1	3	PW BIT 16	7	T1	P2B-20	
C8-3		T	B1	4		8	F1	TP-17	
D9-13		T	C1	5					
B9-24		T	D1	6					
C9-2		T	A2	23	PW BIT 17	11	T2	P2B-19	
C8-5		T	B2	24		12	F2	TP-27	
D9-14		T	C2	1					
B9-3		T	D2	2					
C9-4		T	A3	15	PW BIT 18	14	T3	P2B-18	
C8-4		T	B3	16		13	F3	TP-34	
D9-17		T	C3	17					
B9-5		T	D3	18					
D13-20		T	E1	20					
D13-19		T	E0	19					
			IH	22					

12171 LOC: D13 NAME: MX7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C9-18		T	A1	3	PW BIT 19	7	T1	P2B-17	
C8-22		T	B1	4		8	F1	TP-35	
D9-18		T	C1	5					
B9-4		T	D1	6					
C9-20		T	A2	23	PW BIT 20	11	T2	P2B-15	
C8-23		T	B2	24		12	F2	TP-37	
D9-16		T	C2	1					
B9-1		T	D2	2					
C9-24		T	A3	15	PW BIT 21	14	T3	P2B-14	
C8-24		T	B3	16		13	F3	TP-18	
D9-15		T	C3	17					
B9-2		T	D3	18					
D14-20	D12-20		E1	20					
D14-19	D12-19		E0	19					
			IH	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.8-01
7BXH; CIT/3X00 AD112-C

CODE IDENT 34010 D
DWG NO 60458190
REV J
SHEET CMC 4.8-01A 17-110

12171 LOC: D14 NAME: MX8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B8-2		T	A1	3	PW BIT 22	7	T1	P2B-13	
C8-1		T	B1	4		8	F1	TP-39	
D9-20		T	C1	5					
B9-23		T	D1	6					
B8-4		T	A2	23	PW BIT 23	11	T2	P2B-12	
C8-2		T	B2	24		12	F2	TP-30	
D9-19		T	C2	1					
B9-22		T	D2	2					
D6-17		T	A3	15	PW BIT 66	14	T3	P2B-11	
D9-11		T	B3	16		13	F3	TP-32	
C8-7		T	C3	17					
D6-18		T	D3	18					
PIC-182	D13-20		E1	20					
PIC-181	D13-19		EO	19					
			IH	22					

12171 LOC: C12 NAME: MX9

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B8-18		T	A1	3	PW BIT 24	7	T1	P2B-10	
B7-19		T	B1	4		8	F1	TP-25	
B11-13		T	C1	5					
B10-3		T	D1	6					
B8-20		T	A2	23	PW BIT 25	11	T2	P2B-09	
B7-15		T	B2	24		12	F2	TP-36	
B11-14		T	C2	1					
B10-4		T	D2	2					
B8-24		T	A3	15	PW BIT 26	14	T3	P2B-08	
B7-20		T	B3	16		13	F3	TP-24	
B11-15		T	C3	17					
B10-5		T	D3	18					
C13-20		T	E1	20					
C13-19		T	EO	19					
			IH	22					

12171 LOC: C13 NAME: MXA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A9-2		T	A1	3	PW BIT 27	7	T1	P2B-07	
B7-14		T	B1	4		8	F1	TP-38	
B11-16		T	C1	5					
B10-2		T	D1	6					
A9-4		T	A2	23	PW BIT 28	11	T2	P2B-06	
B7-13		T	B2	24		12	F2	TP-22	
B11-20		T	C2	1					
B10-1		T	D2	2					
A9-18		T	A3	15	PW BIT 29	14	T3	P2B-04	
B7-17		T	B3	16		13	F3	TP-10	
B11-19		T	C3	17					
B10-23		T	D3	18					
C14-20	C12-20		E1	20					
C14-19	C12-19		EO	19					
			IH	22					

12171 LOC: C14 NAME: MXB

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A9-20		T	A1	3	PW BIT 30	7	T1	P2B-03	
B7-18		T	B1	4		8	F1	TP-40	
B11-18		T	C1	5					
B10-22		T	D1	6					
A9-24		T	A2	23	PW BIT 31	11	T2	P2B-02	
B7-16		T	B2	24		12	F2	TP-13	
B11-17		T	C2	1					
B10-24		T	D2	2					
D6-19		T	A3	15	PW BIT 67	14	T3	P2B-01	
B11-11		T	B3	16		13	F3	TP-11	
B7-11		T	C3	17					
D6-20		T	D3	18					
PIC-186	C13-20		E1	20					
PIC-185	C13-19		EO	19					
			IH	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.8-01
7BXH; CIT/3X00 AD112-C

CODE IDENT 34010 D
DWG NO 60458190
REV J
SHEET CMC 4.8-01B 17-111

LEFT ZIF ⚠						
BIT NAME		I/Ø	SHEET CMC 4.8-	TYPE	VIRTUAL PIN.	REAL PIN
PWTWD(0)	TCMWD(0)	I	00	D	X24	P2A-40
PWFWD(0)	FCMWD(0)				48	39
(1)	(1)				25	35
(1)	(1)				49	34
(2)	(2)				26	37
(2)	(2)				4A	38
(3)	(3)				27	31
(3)	(3)				4B	30
(4)	(4)				28	33
(4)	(4)				4C	32
(5)	(5)				29	28
(5)	(5)				4D	29
(6)	(6)				2A	27
(6)	(6)				4E	26
(7)	(7)				2B	23
(7)	(7)				4F	24
(8)	(8)				2C	20
(8)	(8)				50	19
(9)	(9)				2D	22
(9)	(9)				51	21
(10)	(10)				2E	15
(10)	(10)				52	14
(11)	(11)				2F	17
(11)	(11)				53	18
(12)	(12)				30	10
(12)	(12)				54	11
(13)	(13)				31	04
(13)	(13)				55	03
(14)	(14)				32	06
(14)	(14)				56	P2A-07
(15)	(15)				33	P1A-40
(15)	(15)				57	39
(16)	(16)				34	38
(16)	(16)				58	P1A-37
(17)	(17)				35	P2A-02
(17)	(17)				59	P2A-01
(18)	(18)				36	P1A-28
(18)	(18)				5A	29
(19)	(19)				37	27
(19)	(19)				5B	26
(20)	(20)				38	31
(20)	(20)				5C	30
(21)	(21)				39	23
(21)	(21)				5D	24
(22)	(22)				3A	21
(22)	(22)				5E	22
(23)	(23)				3B	17
(23)	(23)				5F	18
(24)	(24)				3C	15
(24)	(24)				60	14
(25)	(25)				3D	20
(25)	(25)				61	19
(26)	(26)				3E	12
(26)	(26)				62	13
(27)	(27)				3F	10
(27)	(27)				63	11
(28)	(28)				40	08
(28)	(28)				64	09
(29)	(29)				41	07
(29)	(29)				65	06
(30)	(30)				42	01
(30)	(30)				66	02
PWTWD(31)	(31)				43	04
PWFWD(31)	(31)				67	P1A-03
PWTWP(64)	(64)				44	P2A-13
PWFWP(64)	(64)				68	12
(65)	(65)				45	09
(65)	(65)				69	P2A-08
(66)	(66)				46	P1A-34
(66)	(66)				6A	35
PWTWP(67)	TCMWP(67)				47	33
PWFWP(67)	FCMWP(67)	I	00	D	X6B	P1A-32

ZIF GRØUND PINS			
P1A-05	P1A-25	P2A-05	P2A-25
P1A-16	P1A-36	P2A-16	P2A-36

CØAX ⚠						
BIT NAME		I/Ø	SHEET CMC 4.8-	TYPE	VIRTUAL PIN	REAL PIN
PWCØNT(0)	PWCØNT(0)	I	01	C	X6E	P1C-174
(1)	(1)				6F	173
(2)	(2)				70	178
(3)	(3)				71	177
(4)	(4)				72	182
(5)	(5)				73	181
(6)	(6)				74	186
PWCØNT(7)	PWCØNT(7)		01		75	185
DPC	DISPC		00		76	092
MCK	NCLKN(436)		01		6C	012
PHM	CLKPM(73)		01		6D	091
RDATA(0)	RDATA(0)		00		00	080
(1)	(1)				01	079
(2)	(2)				02	076
(3)	(3)				03	075
(4)	(4)				04	072
(5)	(5)				05	071
(6)	(6)				06	068
(7)	(7)				07	067
(8)	(8)				08	064
(9)	(9)				09	063
(10)	(10)				0A	060
(11)	(11)				0B	059
(12)	(12)				0C	056
(13)	(13)				0D	055
(14)	(14)				0E	052
(15)	(15)				0F	051
(16)	(16)				10	043
(17)	(17)				11	044
(18)	(18)				12	039
(19)	(19)				13	040
(20)	(20)				14	031
(21)	(21)				15	032
(22)	(22)				16	027
(23)	(23)				17	028
(24)	(24)				18	023
(25)	(25)				19	024
(26)	(26)				1A	019
(27)	(27)				1B	020
(28)	(28)				1C	015
(29)	(29)				1D	016
(30)	(30)				1E	011
RDATA(31)	(31)				1F	007
RDPAR(0)	(64)				20	047
(1)	(65)				21	048
(2)	(66)				22	035
RDPAR(3)	RDATA(67)	I			23	036
RDPEØ	RDPEI	Ø		C	C8	087
RDPE	N/U	Ø		ØPEN	C9	083
RDPEI	N/U	I	00	ØPEN	X77	P1C-098
RDPERR(0)	RDPERR(0)	Ø	00	C	XCA	P1C-003
(1)	(1)				CB	084
(2)	PTCD18(0)				CC	008
RDPERR(3)	PTCD18(1)	Ø	00	C	XCD	P1C-004
DISPC	DPC	Ø	00	C	XCE	P1C-088
HSMP	HSMP	I	01	C	XCF	P1C-097
HSFP1	HSMP	Ø	01	C	XD0	P1C-101

RIGHT ZIF ⚠						
BIT NAME		I/Ø	SHEET CMC 4.8-	TYPE	VIRTUAL PIN	REAL PIN
PWDATA(0)	-DATAIN(0)	Ø	01	Z	XA4	P2B-40
(1)	(1)				A5	39
(2)	(2)				A6	38
(3)	(3)				A7	37
(4)	(4)				A8	35
(5)	(5)				A9	34
(6)	(6)				AA	33
(7)	(7)				AB	32
(8)	(8)				AC	30
(9)	(9)				AD	29
(10)	(10)				AE	28
(11)	(11)				AF	27
(12)	(12)				B0	26
(13)	(13)				B1	24
(14)	(14)				B2	23
(15)	(15)				B3	22
(16)	(16)				B4	20
(17)	(17)				B5	19
(18)	(18)				B6	18
(19)	(19)				B7	17
(20)	(20)				B8	15
(21)	(21)				B9	14
(22)	(22)				BA	13
(23)	(23)				BB	12
(24)	(24)				BC	10
(25)	(25)				BD	09
(26)	(26)				BE	08
(27)	(27)				BF	07
(28)	(28)				C0	06
(29)	(29)				C1	04
(30)	(30)				C2	03
PWDATA(31)	DATAIN(31)				C3	02
PWDPAR(64)	PARIN(0)				C4	31
(65)	(1)				C5	21
(66)	(2)				C6	11
PWDPAR(67)	PARIN(3)		01		C7	P2B-01
RDDATA(0)	RDDATA(0)		00		80	P1B-40
(1)	(0)				81	39
(2)	(0)				82	38
(3)	(0)				83	37
(4)	(0)				84	35
(5)	(0)				85	34
(6)	(0)				86	33
(7)	(0)				87	32
(8)	(1)				88	30
(9)	(1)				89	29
(10)	(1)				8A	28
(11)	(1)				8B	27
(12)	(1)				8C	26
(13)	(1)				8D	24
(14)	(1)				8E	23
(15)	(1)				8F	22
(16)	(2)				90	20
(17)	(2)				91	19
(18)	(2)				92	18
(19)	(2)				93	17
(20)	(2)				94	15
(21)	(2)				95	14
(22)	(2)				96	13
(23)	(2)				97	12
(24)	(3)				98	10
(25)	(3)				99	09
(26)	(3)				9A	08
(27)	(3)				9B	07
(28)	(3)				9C	06
(29)	(3)				9D	04
(30)	(3)				9E	03
(31)	(3)				9F	02
(64)	(0)				A0	31
(65)	(1)				A1	21
(66)	(2)				A2	11
RDDATA(67)	RDDATA(3)	Ø	00	Z	XA3	P1B-01

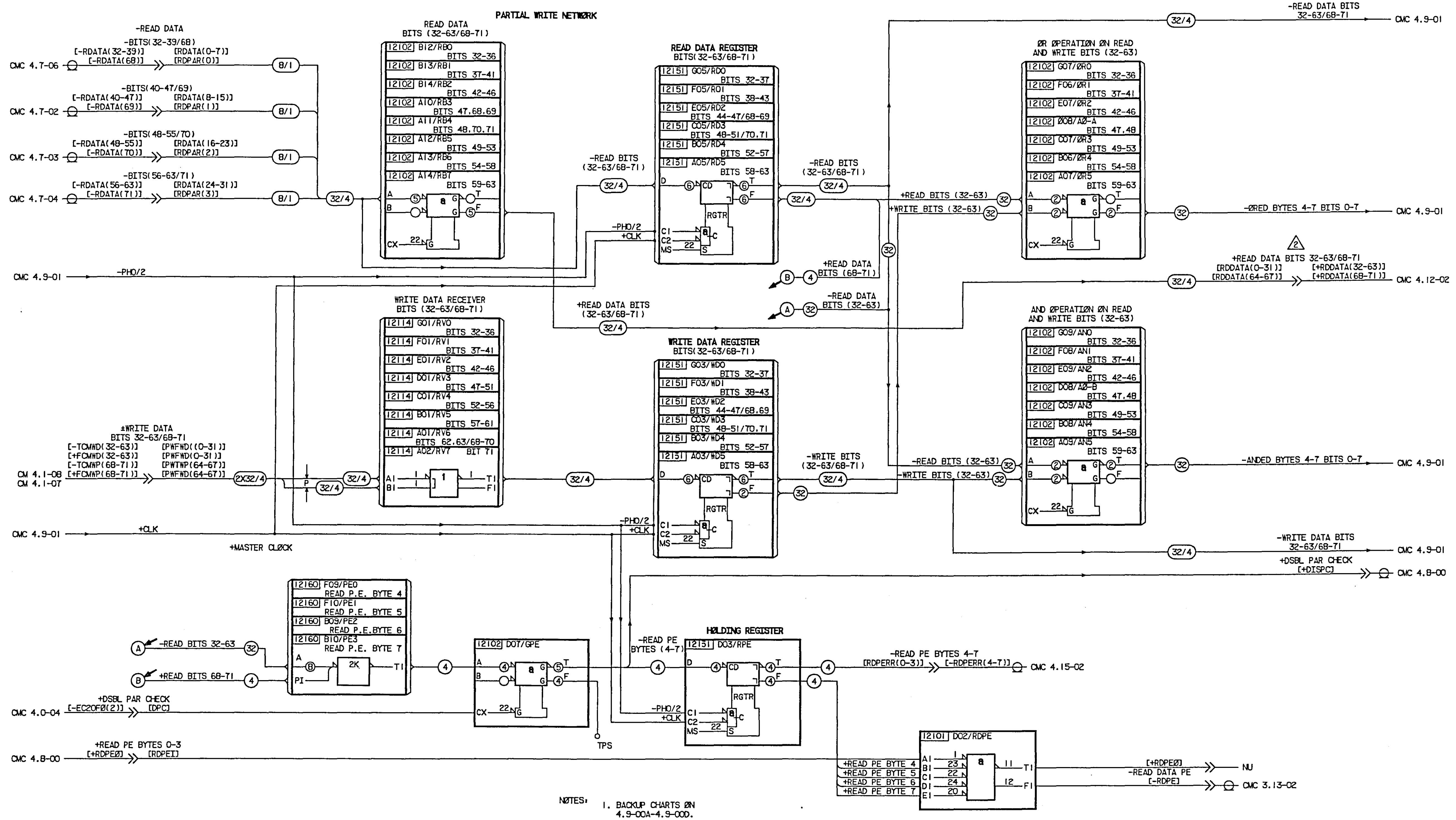
ZIF GRØUND PINS			
P1B-05	P1B-25	P2B-05	P2B-25
P1B-16	P1B-36	P2B-16	P2B-36

NØTE:

⚠ CØNNECTØR TYPES:

C = CØAX
D = DIFFERENTIAL
Z = ZIF TØ FØIL ØN INTERCØNNECT BØARD

CONTROL DATA CORPORATION	LEVEL 4 CØNNECTØR CHART SUPPLEMENTAL WIRING INFØRMATIØN	CODE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	7BXH:C1T/3X00 AD112-C	SHEET CMC 4.8-CC		PAGE 17-112



NØTES:
1. BACKUP CHARTS ØN 4.9-00A-4.9-00D.
2. FANØUT TØ 9 PAKS

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CMC 3.7
PARTIAL WRITE NETWØRK, READ DATA REGISTER, WRITE DATA REGISTER
7BXH, C1U/3X01
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.9-00	17-113

12102 LOC: B12 NAME: RB0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-2		T	A1	3	READ	5	T1	TERM	
			B1	4	BIT 32	6	F1	PIB-40	
G5-1		T	A2	1	READ	8	T2	TERM	
			B2	2	BIT 33	7	F2	PIB-39	
G5-20		T	A3	23	READ	12	T3	TERM	
			B3	24	BIT 34	11	F3	PIB-38	
G5-19		T	A4	19	READ	13	T4	TERM	
			B4	20	BIT 35	14	F4	PIB-37	
G5-18		T	A5	17	READ	16	T5	TERM	
			B5	18	BIT 36	15	F5	PIB-35	
			CX	22					

12102 LOC: B13 NAME: RB1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-17		T	A1	3	READ	5	T1	TERM	
			B1	4	BIT 37	6	F1	PIB-34	
F5-2		T	A2	1	READ	8	T2	TERM	
			B2	2	BIT 38	7	F2	PIB-33	
F5-1		T	A3	23	READ	12	T3	TERM	
			B3	24	BIT 39	11	F3	PIB-32	
F5-20		T	A4	19	READ	13	T4	TERM	
			B4	20	BIT 40	14	F4	PIB-30	
F5-19		T	A5	17	READ	16	T5	TERM	
			B5	18	BIT 41	15	F5	PIB-29	
			CX	22					

12102 LOC: B14 NAME: RB2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F5-18		T	A1	3	READ	5	T1	TERM	
			B1	4	BIT 42	6	F1	PIB-28	
F5-17		T	A2	1	READ	8	T2	TERM	
			B2	2	BIT 43	7	F2	PIB-27	
E5-2		T	A3	23	READ	12	T3	TERM	
			B3	24	BIT 44	11	F3	PIB-26	
E5-1		T	A4	19	READ	13	T4	TERM	
			B4	20	BIT 45	14	F4	PIB-24	
E5-20		T	A5	17	READ	16	T5	TERM	
			B5	18	BIT 46	15	F5	PIB-23	
			CX	22					

12102 LOC: A10 NAME: RB3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E5-19		T	A1	3	READ	5	T1	TERM	
			B1	4	BIT 47	6	F1	PIB-22	
E5-18		T	A2	1	READ	8	T2	TERM	
			B2	2	BIT 68	7	F2	PIB-31	
E5-17		T	A3	23	READ	12	T3	TERM	
			B3	24	BIT 69	11	F3	PIB-21	
			A4	19		13	T4		
			B4	20		14	F4		
			A5	17		16	T5		
			B5	18		15	F5		
			CX	22					

12102 LOC: A11 NAME: RB4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C5-18		T	A1	3	READ	5	T1	TERM	
			B1	4	BIT 70	6	F1	PIB-11	
C5-17		T	A2	1	READ	8	T2	TERM	
			B2	2	BIT 71	7	F2	PIB-01	
C5-2		T	A3	23	READ	12	T3	TERM	
			B3	24	BIT 48	11	F3	PIB-20	
			A4	19		13	T4		
			B4	20		14	F4		
			A5	17		16	T5		
			B5	18		15	F5		
			CX	22					

12102 LOC: A12 NAME: RB5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C5-1		T	A1	3	READ	5	T1	TERM	
			B1	4	BIT 49	6	F1	PIB-19	
C5-20		T	A2	1	READ	8	T2	TERM	
			B2	2	BIT 50	7	F2	PIB-18	
C5-19		T	A3	23	READ	12	T3	TERM	
			B3	24	BIT 51	11	F3	PIB-17	
B5-2		T	A4	19	READ	13	T4	TERM	
			B4	20	BIT 52	14	F4	PIB-15	
B5-1		T	A5	17	READ	16	T5	TERM	
			B5	18	BIT 53	15	F5	PIB-14	
			CX	22					

12102 LOC: A13 NAME: RB6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B5-20		T	A1	3	READ	5	T1	TERM	
			B1	4	BIT 54	6	F1	PIB-13	
B5-19		T	A2	1	READ	8	T2	TERM	
			B2	2	BIT 55	7	F2	PIB-12	
B5-18		T	A3	23	READ	12	T3	TERM	
			B3	24	BIT 56	11	F3	PIB-10	
B5-17		T	A4	19	READ	13	T4	TERM	
			B4	20	BIT 57	14	F4	PIB-09	
A5-2		T	A5	17	READ	16	T5	TERM	
			B5	18	BIT 58	15	F5	PIB-08	
			CX	22					

12102 LOC: A14 NAME: RB7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A5-1		T	A1	3	READ	5	T1	TERM	
			B1	4	BIT 59	6	F1	PIB-07	
A5-20		T	A2	1	READ	8	T2	TERM	
			B2	2	BIT 60	7	F2	PIB-06	
A5-19		T	A3	23	READ	12	T3	TERM	
			B3	24	BIT 61	11	F3	PIB-04	
A5-18		T	A4	19	READ	13	T4	TERM	
			B4	20	BIT 62	14	F4	PIB-03	
A5-17		T	A5	17	READ	16	T5	TERM	
			B5	18	BIT 63	15	F5	PIB-02	
			CX	22					

12151 LOC: G05 NAME: RD0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-80	B12-3		D1	2	READ	3	T1	G9-1	3
					BIT 32	4	F1	G7-1	1
PIC-79	B12-1		D2	1	READ	6	T2	G9-3	3
					BIT 33	5	F2	G7-3	1
PIC-76	B12-23		D3	20	READ	8	T3	G9-17	3
					BIT 34	7	F3	G7-17	1
PIC-75	B12-19		D4	19	READ	12	T4	G9-19	3
					BIT 35	11	F4	G7-19	1
PIC-72	B12-17		D5	18	READ	14	T5	G9-23	3
					BIT 36	13	F5	G7-23	1
PIC-71	B13-3		D6	17	READ	16	T6	F8-1	3
					BIT 37	15	F6	F6-1	1
G3-24		T	C1	24	NOTE: C1 FROM TOT2, PIN F1				
G3-23		T	C2	23	C2 FROM MCF, PIN T2				
			MS	22					

12151 LOC: F05 NAME: RD1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-68	B13-1		D1	2	READ	3	T1	F8-3	3
					BIT 38	4	F1	F6-3	1
PIC-67	B13-23		D2	1	READ	6	T2	F8-17	3
					BIT 39	5	F2	F6-17	1
PIC-64	B13-19		D3	20	READ	8	T3	F8-19	3
					BIT 40	7	F3	F6-19	1
PIC-63	B13-17		D4	19	READ	12	T4	F8-23	3
					BIT 41	11	F4	F6-23	1
PIC-60	B14-3		D5	18	READ	14	T5	E9-1	3
					BIT 42	13	F5	E7-1	1
PIC-59	B14-1		D6	17	READ	16	T6	E9-3	3
					BIT 43	15	F6	E7-3	1
F3-24		T	C1	24	NOTE: C1 FROM TOT2, PIN F2				
F3-23		T	C2	23	C2 FROM MCF, PIN T2				
			MS	22					

12151 LOC: E05 NAME: RD2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-56	B14-23		D1	2	READ	3	T1	E9-17	3
					BIT 44	4	F1	E7-17	1
PIC-55	B14-19		D2	1	READ	6	T2	E9-19	3
					BIT 45	5	F2	E7-19	1
PIC-52	B14-17		D3	20	READ	8	T3	E9-23	3
					BIT 46	7	F3	E7-23	1
PIC-51	A10-3		D4	19	READ	12	T4	D8-17	3
					BIT 47	11	F4	D8-1	1
PIC-47	A10-1		D5	18	READ	14	T5	D6-3	2
					BIT 68	13	F5	F9-6	1
PIC-48	A10-23		D6	17	READ	16	T6	D6-24	2
					BIT 69	15	F6	F10-6	1
E3-24		T	C1	24	NOTE: C1 FROM TOT2, PIN F3				
E3-23		T	C2	23	C2 FROM MCF, PIN T3				
			MS	22					

12151 LOC: C05 NAME: RD3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-43	A11-23		D1	2	READ	3	T1	D8-19	3
					BIT 48	4	F1	D8-3	1
PIC-44	A12-03		D2	1	READ	6	T2	C9-1	3
					BIT 49	5	F2	C7-1	1
PIC-39	A12-1		D3	20	READ	8	T3	C9-3	3
					BIT 50	7	F3	C7-3	1
PIC-40	A12-23		D4	19	READ	12	T4	C9-17	3
					BIT 51	11	F4	C7-17	1
PIC-35	A11-3		D5	18	READ	14	T5	D6-18	2
					BIT 70	13	F5	B9-6	1
PIC-36	A11-1		D6	17	READ	16	T6	D6-20	2
					BIT 71	15	F6	B10-6	1
D5-3		T	C1	24	NOTE: C1 FROM TOT2, PIN F3				
C3-23		T	C2	23	C2 FROM MCF, PIN T3				
			MS	22					

12151 LOC: B05 NAME: RD4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-31	A12-19		D1	2	READ	3	T1	C9-19	3
					BIT 52	4	F1	C7-19	1
PIC-32	A12-17		D2	1	READ	6	T2	C9-23	3
					BIT 53	5	F2	C7-23	1
PIC-27	A13-3		D3	20	READ	8	T3	B8-1	3
					BIT 54	7	F3	B6-1	1
PIC-28	A13-1		D4	19	READ	12	T4	B8-3	3
					BIT 55	11	F4	B6-3	1
PIC-23	A13-23		D5	18	READ	14	T5	B8-17	3
					BIT 56	13	F5	B6-17	1
PIC-24	A13-19		D6	17	READ	16	T6	B8-19	3
					BIT 57	15	F6	B6-19	1
B3-24		T	C1	24	NOTE: C1 FROM TOT2, PIN F4				
B3-23		T	C2	23	C2 FROM MCF, PIN T4				
			MS	22					

12151 LOC: A05 NAME: RD5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-19	A13-17		D1	2	READ	3	T1	B8-23	
					BIT 58	4	F1	B6-23	
PIC-20	A14-3		D2	1	READ	6	T2	A9-1	
					BIT 59	5	F2	A7-1	
PIC-15	A14-1		D3	20	READ	8	T3	A9-3	
					BIT 60	7	F3	A7-3	
PIC-16	A14-23		D4	19	READ	12	T4	A9-17	
					BIT 61	11	F4	A7-17	
PIC-11	A14-19		D5	18	READ	14	T5	A9-19	
					BIT 62	13	F5	A7-19	
PIC-07	A14-17		D6	17	READ	16	T6	A9-23	
					BIT 63	15	F6	A7-23	
A3-24		T	C1	24	NOTE: C1 FROM TOT2, PIN F4				
A3-23		T	C2	23	C2 FROM MCF, PIN T4				
			MS	22					

12102 LOC: G07 NAME: ØR0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-4		T	A1	1	ØRED	8	T1	TERM	
G3-4		T	B1	2	BIT 32	7	F1	G8-19	2
G5-5		T	A2	3	ØRED	5	T2	TERM	
G3-5		T	B2	4	BIT 33	6	F2	G8-20	2
G5-7		T	A3	17	ØRED	16	T3	TERM	
G3-7		T	B3	18	BIT 34	15	F3	G8-14	2
G5-11		T	A4	19	ØRED	13	T4	TERM	
G3-11		T	B4	20	BIT 35	14	F4	G8-15	2
G5-13		T	A5	23	ØRED	12	T5	TERM	
G3-13		T	B5	24	BIT 36	11	F5	G8-13	2
			CX	22					

12102 LOC: F06 NAME: ØR1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-15		T	A1	1	ØRED	8	T1	TERM	
G3-15		T	B1	2	BIT 37	7	F1	G8-17	2
F5-4		T	A2	3	ØRED	5	T2	TERM	
F3-4		T	B2	4	BIT 38	6	F2	G8-18	2
F5-5		T	A3	17	ØRED	16	T3	TERM	
F3-5		T	B3	18	BIT 39	15	F3	G8-16	2
F5-7		T	A4	19	ØRED	13	T4	TERM	
F3-7		T	B4	20	BIT 40	14	F4	F7-14	2
F5-11		T	A5	23	ØRED	12	T5	TERM	
F3-11		T	B5	24	BIT 41	11	F5	F7-13	2
			CX	22					

12102 LOC: E07 NAME: ØR2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F5-13		T	A1	1	ØRED	8	T1	TERM	
F3-13		T	B1	2	BIT 42	7	F1	F7-15	2
F5-15		T	A2	3	ØRED	5	T2	TERM	
F3-15		T	B2	4	BIT 43	6	F2	F7-17	2
E5-4		T	A3	17	ØRED	16	T3	TERM	
E3-4		T	B3	18	BIT 44	15	F3	F7-18	2
E5-5		T	A4	19	ØRED	13	T4	TERM	
E3-5		T	B4	20	BIT 45	14	F4	F7-19	2
E5-7		T	A5	23	ØRED	12	T5	TERM	
E3-7		T	B5	24	BIT 46	11	F5	F7-16	2
			CX	22					

12102 LOC: D08 NAME: AØ-A/B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E5-11		T	A1	1	ØRED	8	T1	TERM	
E3-11		T	B1	2	BIT 47	7	F1	F7-20	2
C5-4		T	A2	3	ØRED	5	T2	TERM	
C3-4		T	B2	4	BIT 48	6	F2	C8-3	2
E5-12	F10-2		A3	17	ANDED	16	T3	F11-14	2
E3-12	E14-23		B3	18	BIT 47	15	F3	TERM	
C5-3	B9-24		A4	19	ANDED	13	T4	D9-13	2
C3-3	D12-3		B4	20	BIT 48	14	F4	TERM	
			A5	23		12	T5		
			B5	24		11	F5		
			CX	22					

12102 LOC: C07 NAME: ØR3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C5-5		T	A1	1	ØRED	8	T1	TERM	
C3-5		T	B1	2	BIT 49	7	F1	C8-5	2
C5-7		T	A2	3	ØRED	5	T2	TERM	
C3-7		T	B2	4	BIT 50	6	F2	C8-4	2
C5-11		T	A3	17	ØRED	16	T3	TERM	
C3-11		T	B3	18	BIT 51	15	F3	C8-22	2
B5-4		T	A4	19	ØRED	13	T4	TERM	
B3-4		T	B4	20	BIT 52	14	F4	C8-23	2
B5-5		T	A5	23	ØRED	12	T5	TERM	
B3-5		T	B5	24	BIT 53	11	F5	C8-24	2
			CX	22					

CONTROL DATA CORPORATION ARDEN HILLS OPERATIONS	LEVEL 4 BACKUP CHART SUPPLEMENTAL WIRING INFORMATION CMC 4.9-00 7BXH; CIU/3X01 AD112-C	CODE IDENT 34010	D	DWG NO 60458190	REV J
				SHEET CMC 4.9-00A	17-114

12102 LOC: B06 NAME: ØR4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B5-7		T	A1	1	ØRED	8	T1	TERM	
B3-7		T	B1	2	BIT 54	7	F1	C8-1	2
B5-11		T	A2	3	ØRED	5	T2	TERM	
B3-11		T	B2	4	BIT 55	6	F2	C8-2	2
B5-13		T	A3	17	ØRED	16	T3	TERM	
B3-13		T	B3	18	BIT 56	15	F3	B7-19	2
B5-15		T	A4	19	ØRED	13	T4	TERM	
B3-15		T	B4	20	BIT 57	14	F4	B7-15	2
A5-4		T	A5	23	ØRED	12	T5	TERM	
A3-4		T	B5	24	BIT 58	11	F5	B7-20	2
			CX	22					

12102 LOC: A07 NAME: ØR5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A5-5		T	A1	1	ØRED	8	T1	TERM	
A3-5		T	B1	2	BIT 59	7	F1	B7-14	2
A5-7		T	A2	3	ØRED	5	T2	TERM	
A3-7		T	B2	4	BIT 60	6	F2	B7-13	2
A5-11		T	A3	17	ØRED	16	T3	TERM	
A3-11		T	B3	18	BIT 61	15	F3	B7-17	2
A5-13		T	A4	19	ØRED	13	T4	TERM	
A3-13		T	B4	20	BIT 62	14	F4	B7-18	2
A5-15		T	A5	23	ØRED	12	T5	TERM	
A3-15		T	B5	24	BIT 63	11	F5	B7-16	2
			CX	22					

12114 LOC: G01 NAME: RV0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-40			A1	2	WRITE	7	T1	G3-2	
P2A-39			B1	1	BIT 32	8	F1	TERM	
P2A-35			A2	4	WRITE	5	T2	G3-1	
P2A-34			B2	3	BIT 33	6	F2	TERM	
P2A-37			A3	24	WRITE	11	T3	G3-20	
P2A-38			B3	23	BIT 34	12	F3	TERM	
P2A-31			A4	18	WRITE	15	T4	G3-19	
P2A-30			B4	17	BIT 35	16	F4	TERM	
P2A-33			A5	20	WRITE	13	T5	G3-18	
P2A-32			B5	19	BIT 36	14	F5	TERM	

12114 LOC: F01 NAME: RV1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-28			A1	4	WRITE	5	T1	G3-17	
P2A-29			B1	3	BIT 37	6	F1	TERM	
P2A-27			A2	2	WRITE	7	T2	F3-2	
P2A-26			B2	1	BIT 38	8	F2	TERM	
P2A-23			A3	18	WRITE	15	T3	F3-1	
P2A-24			B3	17	BIT 39	16	F3	TERM	
P2A-20			A4	20	WRITE	13	T4	F3-20	
P2A-19			B4	19	BIT 40	14	F4	TERM	
P2A-22			A5	24	WRITE	11	T5	F3-19	
P2A-21			B5	23	BIT 41	12	F5	TERM	

12114 LOC: E01 NAME: RV2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-15			A1	2	WRITE	7	T1	F3-18	
P2A-14			B1	1	BIT 42	8	F1	TERM	
P2A-17			A2	4	WRITE	5	T2	F3-17	
P2A-18			B2	3	BIT 43	6	F2	TERM	
P2A-10			A3	18	WRITE	15	T3	E3-2	
P2A-11			B3	17	BIT 44	16	F3	TERM	
P2A-13			A4	24	WRITE	11	T4	E3-18	
P2A-12			B4	23	BIT 45	12	F4	TERM	
P2A-09			A5	20	WRITE	13	T5	E3-17	
P2A-08			B5	19	BIT 46	14	F5	TERM	

12114 LOC: D01 NAME: RV3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-04			A1	4	WRITE	5	T1	E3-1	
P2A-03			B1	3	BIT 47	6	F1	TERM	
P2A-06			A2	2	WRITE	7	T2	E3-20	
P2A-07			B2	1	BIT 48	8	F2	TERM	
P1A-40			A3	18	WRITE	15	T3	E3-19	
P1A-39			B3	17	BIT 49	16	F3	TERM	
P1A-38			A4	20	WRITE	13	T4	C3-2	
P1A-37			B4	19	BIT 50	14	F4	TERM	
P2A-02			A5	24	WRITE	11	T5	C3-1	
P2A-01			B5	23	BIT 51	12	F5	TERM	

12114 LOC: C01 NAME: RV4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-28			A1	18	WRITE	15	T1	C3-20	
P1A-29			B1	17	BIT 52	16	F1	TERM	
P1A-27			A2	20	WRITE	13	T2	C3-19	
P1A-26			B2	19	BIT 53	14	F2	TERM	
P1A-31			A3	24	WRITE	11	T3	B3-2	
P1A-30			B3	23	BIT 54	12	F3	TERM	
P1A-34			A4	2	WRITE	7	T4	C3-18	
P1A-35			B4	1	BIT 55	8	F4	TERM	
P1A-33			A5	4	WRITE	5	T5	C3-17	
P1A-32			B5	3	BIT 56	6	F5	TERM	

12114 LOC: B01 NAME: RV5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-23			A1	2	WRITE	7	T1	B3-1	
P1A-24			B1	1	BIT 57	8	F1	TERM	
P1A-21			A2	4	WRITE	5	T2	B3-20	
P1A-22			B2	3	BIT 58	6	F2	TERM	
P1A-17			A3	20	WRITE	13	T3	B3-19	
P1A-18			B3	19	BIT 59	14	F3	TERM	
P1A-15			A4	18	WRITE	15	T4	B3-18	
P1A-14			B4	17	BIT 60	16	F4	TERM	
P1A-20			A5	24	WRITE	11	T5	B3-17	
P1A-19			B5	23	BIT 61	12	F5	TERM	

12114 LOC: A01 NAME: RV6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-12			A1	2	WRITE	7	T1	A3-2	
P1A-13			B1	1	BIT 62	8	F1	TERM	
P1A-10			A2	4	WRITE	5	T2	A3-1	
P1A-11			B2	3	BIT 63	6	F2	TERM	
P1A-08			A3	24	WRITE	11	T3	A3-20	
P1A-09			B3	23	BIT 68	12	F3	TERM	
P1A-07			A4	20	WRITE	13	T4	A3-19	
P1A-06			B4	19	BIT 69	14	F4	TERM	
P1A-01			A5	18	WRITE	15	T5	A3-18	
P1A-02			B5	17	BIT 70	16	F5	TERM	

12114 LOC: A02 NAME: RV7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-04			A1	18	WRITE	15	T1	A3-17	
P1A-03			B1	17	BIT 71	16	F1	TERM	
			A2	2		7	T2		
			B2	1		8	F2		
			A3	4		5	T3		
			B3	3		6	F3		
			A4	24		11	T4		
			B4	23		12	F4		
			A5	20		13	T5		
			B5	19		14	F5		

12151 LOC: G03 NAME: WD0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G1-7		T	D1	2	WRITE	3	T1	G9-2	2
					BIT 32	4	F1	G7-2	1
G1-5		T	D2	1	WRITE	6	T2	G9-4	2
					BIT 33	5	F2	G7-4	1
G1-11		T	D3	20	WRITE	8	T3	G9-18	2
					BIT 34	7	F3	G7-18	1
G1-15		T	D4	19	WRITE	12	T4	G9-20	2
					BIT 35	11	F4	G7-20	1
G1-13		T	D5	18	WRITE	14	T5	G9-24	2
					BIT 36	13	F5	G7-24	1
F1-5		T	D6	17	WRITE	16	T6	F8-2	2
					BIT 37	15	F6	F6-2	1
D5-4	G5-24		C1	24	NOTE: C1 FROM TOT2, PIN F5				
E4-8	G5-23		C2	23	C2 FROM MCF, PIN T5				
			MS	22					

12151 LOC: F03 NAME: WD1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F1-7		T	D1	2	WRITE	3	T1	F8-4	2
					BIT 38	4	F1	F6-4	1
F1-15		T	D2	1	WRITE	6	T2	F8-18	2
					BIT 39	5	F2	F6-18	1
F1-13		T	D3	20	WRITE	8	T3	F8-20	2
					BIT 40	7	F3	F6-20	1
F1-11		T	D4	19	WRITE	12	T4	F8-24	2
					BIT 41	11	F4	F6-24	1
E1-7		T	D5	18	WRITE	14	T5	E9-2	2
					BIT 42	13	F5	E7-2	1
E1-5		T	D6	17	WRITE	16	T6	E9-4	2
					BIT 43	15	F6	E7-4	1
D5-6	F5-24		C1	24	NOTE: C1 FROM TOT2, PIN F5				
E4-7	F5-23		C2	23	C2 FROM MCF, PIN T5				
			MS	22					

12151 LOC: E03 NAME: WD2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E1-15		T	D1	2	WRITE	3	T1	E9-18	2
					BIT 44	4	F1	E7-18	1
D1-5		T	D2	1	WRITE	6	T2	E9-20	2
					BIT 45	5	F2	E7-20	1
D1-7		T	D3	20	WRITE	8	T3	E9-24	2
					BIT 46	7	F3	E7-24	1
D1-15		T	D4	19	WRITE	12	T4	D8-18	2
					BIT 47	11	F4	D8-2	1
E1-11		T	D5	18	WRITE	14	T5	D6-2	2
					BIT 68	13	F5	TERM	
E1-13		T	D6	17	WRITE	16	T6	D6-1	2
					BIT 69	15	F6	TERM	
D5-15	E5-24		C1	24	NOTE: C1 FROM TOT2, PIN F6				
E4-2	E5-23		C2	23	C2 FROM MCF, PIN T6				
			MS	22					

12151 LOC: C03 NAME: WD3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D1-13		T	D1	2	WRITE	3	T1	D8-20	2
					BIT 48	4	F1	D8-4	1
D1-11		T	D2	1	WRITE	6	T2	C9-2	2
					BIT 49	5	F2	C7-2	1
C1-15		T	D3	20	WRITE	8	T3	C9-4	2
					BIT 50	7	F3	C7-4	1
C1-13		T	D4	19	WRITE	12	T4	C9-18	2
					BIT 51	11	F4	C7-18	1
C1-7		T	D5	18	WRITE	14	T5	D6-17	2
					BIT 70	13	F5	TERM	
C1-5		T	D6	17	WRITE	16	T6	D6-19	2
					BIT 71	15	F6	TERM	
D5-13		T	C1	24	NOTE: C1 FROM TOT2, PIN F6				
E4-12	C5-23		C2	23	C2 FROM MCF, PIN T6				
			MS	22					

12151 LOC: B03 NAME: WD4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C1-11		T	D1	2	WRITE	3	T1	C9-20	2
					BIT 52	4	F1	C7-20	1
B1-7		T	D2	1	WRITE	6	T2	C9-24	2
					BIT 53	5	F2	C7-24	1
B1-5		T	D3	20	WRITE	8	T3	B8-2	2
					BIT 54	7	F3	B6-2	1
B1-13		T	D4	19	WRITE	12	T4	B8-4	2
					BIT 55	11	F4	B6-4	1
B1-15		T	D5	18	WRITE	14	T5	B8-18	2
					BIT 56	13	F5	B6-18	1
B1-11		T	D6	17	WRITE	16	T6	B8-20	2
					BIT 57	15	F6	B6-20	1
D5-14	B5-24		C1	24	NOTE: C1 FROM TOT2, PIN F7				
E4-17	B5-23		C2	23	C2 FROM MCF, PIN T7				
			MS	22					

12151 LOC: A03 NAME: WD5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A1-7		T	D1	2	WRITE	3	T1	B8-24	2
					BIT 58	4	F1	B6-24	1
A1-5		T	D2	1	WRITE	6	T2	A9-2	2
					BIT 59	5	F2	A7-2	1
A1-11		T	D3	20	WRITE	8	T3	A9-4	2
					BIT 60	7	F3	A7-4	1
A1-13		T	D4	19	WRITE	12	T4	A9-18	2
					BIT 61	11	F4	A7-18	1
A1-15		T	D5	18	WRITE	14	T5	A9-20	2
					BIT 62	13	F5	A7-20	1
A2-15		T	D6	17	WRITE	16	T6	A9-24	2
					BIT 63	15	F6	A7-24	1
D5-16	A5-24		C1	24	NOTE: C1 FROM TOT2, PIN F7				
E4-11	A5-23		C2	23	C2 FROM MCF, PIN T7				
			MS	22					

12102 LOC: G09 NAME: AN0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-3	F9-1		A1	1	ANDED	8	T1	G10-4	2
G3-3	G13-3		B1	2	BIT 32	7	F1	TERM	
G5-6	F9-3		A2	3	ANDED	5	T2	G10-5	2
G3-6	G13-23		B2	4	BIT 33	6	F2	TERM	
G5-8	F9-2		A3	17	ANDED	16	T3	G10-22	2
G3-8	G13-15		B3	18	BIT 34	15	F3	TERM	
G5-12	F9-24		A4	19	ANDED	13	T4	G10-2	2
G3-12	G14-3		B4	20	BIT 35	14	F4	TERM	
G5-14	F9-23		A5	23	ANDED	12	T5	G10-3	2
G3-14	G14-23		B5	24	BIT 36	11	F5	TERM	
			CX	22					

12102 LOC: F08 NAME: AN1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-16	F9-4		A1	1	ANDED	8	T1	G10-23	2
G3-16	G14-15		B1	2	BIT 37	7	F1	TERM	
F5-3	F9-5		A2	3	ANDED	5	T2	G10-1	2
F3-3	F13-3		B2	4	BIT 38	6	F2	TERM	
F5-6	F9-22		A3	17	ANDED	16	T3	G10-24	2
F3-6	F13-23		B3	18	BIT 39	15	F3	TERM	
F5-8	F10-24		A4	19	ANDED	13	T4	F11-19	2
F3-8	F14-3		B4	20	BIT 40	14	F4	TERM	
F5-12	F10-23		A5	23	ANDED	12	T5	F11-20	2
F3-12	F14-23		B5	24	BIT 41	11	F5	TERM	
			CX	22					

CONTROL DATA CORPORATION ARDEN HILLS OPERATIONS	LEVEL 4 BACKUP CHART SUPPLEMENTAL WIRING INFORMATION CMC 4.9-00 7BXH; CIU/3X01 AD112-C	CODE IDENT 34010	D	DWG NO 60458190 SHEET CMC 4.9-008 17-115	REV J

12102 LOC: E09 NAME: AN2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F5-14	F10-22		A1	1	ANDED	8	T1	F11-18	2
F3-14	F14-15		B1	2	BIT 42	7	F1	TERM	
F5-16	F10-1		A2	3	ANDED	5	T2	F11-17	2
F3-16	E13-3		B2	4	BIT 43	6	F2	TERM	
E5-3	F10-5		A3	17	ANDED	16	T3	F11-16	2
E3-3	E13-23		B3	18	BIT 44	15	F3	TERM	
E5-6	F10-4		A4	19	ANDED	13	T4	F11-15	2
E3-6	E13-15		B4	20	BIT 45	14	F4	TERM	
E5-8	F10-3		A5	23	ANDED	12	T5	F11-13	2
E3-8	E14-3		B5	24	BIT 46	11	F5	TERM	
			CX	22					

12102 LOC: C09 NAME: AN3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C5-6	B9-3		A1	1	ANDED	8	T1	D9-14	2
C3-6	D12-23		B1	2	BIT 49	7	F1	TERM	
C5-8	B9-5		A2	3	ANDED	5	T2	D9-17	2
C3-8	D12-15		B2	4	BIT 50	6	F2	TERM	
C5-12	B9-4		A3	17	ANDED	16	T3	D9-18	2
C3-12	D13-3		B3	18	BIT 51	15	F3	TERM	
B5-3	B9-1		A4	19	ANDED	13	T4	D9-16	2
B3-3	D13-23		B4	20	BIT 52	14	F4	TERM	
B5-6	B9-2		A5	23	ANDED	12	T5	D9-15	2
B3-6	D13-15		B5	24	BIT 53	11	F5	TERM	
			CX	22					

12102 LOC: B08 NAME: AN4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B5-8	B9-23		A1	1	ANDED	8	T1	D9-20	2
B3-8	D14-3		B1	2	BIT 54	7	F1	TERM	
B5-12	B9-22		A2	3	ANDED	5	T2	D9-19	2
B3-12	D14-23		B2	4	BIT 55	6	F2	TERM	
B5-14	B10-3		A3	17	ANDED	16	T3	B11-13	2
B3-14	C12-3		B3	18	BIT 56	15	F3	TERM	
B5-16	B10-4		A4	19	ANDED	13	T4	B11-14	2
B3-16	C12-23		B4	20	BIT 57	14	F4	TERM	
A5-3	B10-5		A5	23	ANDED	12	T5	B11-15	2
A3-3	C12-15		B5	24	BIT 58	11	F5	TERM	
			CX	22					

12102 LOC: A09 NAME: AN5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A5-6	B10-2		A1	1	ANDED	8	T1	B11-16	2
A3-6	C13-3		B1	2	BIT 59	7	F1	TERM	
A5-8	B10-1		A2	3	ANDED	5	T2	B11-20	2
A3-8	C13-23		B2	4	BIT 60	6	F2	TERM	
A5-12	B10-23		A3	17	ANDED	16	T3	B11-19	2
A3-12	C13-15		B3	18	BIT 61	15	F3	TERM	
A5-14	B10-22		A4	19	ANDED	13	T4	B11-18	2
A3-14	C14-3		B4	20	BIT 62	14	F4	TERM	
A5-16	B10-24		A5	23	ANDED	12	T5	B11-17	2
A3-16	C14-23		B5	24	BIT 63	11	F5	TERM	
			CX	22					

12160 LOC: F09 NAME: PE0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
G9-1	G13-6		A1	1	BIT 32	7	T1	D7-1	
G9-3	G13-2		A2	3	BIT 33				
G9-17	G13-18		A3	2	BIT 34				
G9-19	G14-6		A4	24	BIT 35				
G9-23	G14-2		A5	23	BIT 36				
F8-1	G14-18		A6	4	BIT 37				
F8-3	F13-6		A7	5	BIT 38				
F8-17	F13-2		A8	22	BIT 39				
E5-13		T	PI	6	BIT 68				

12160 LOC: F10 NAME: PE1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F8-19	F14-6		A1	24	BIT 40	7	T1	D7-3	
F8-23	F14-2		A2	23	BIT 41				
E9-1	F14-18		A3	22	BIT 42				
E9-3	E13-6		A4	1	BIT 43				
E9-17	E13-2		A5	5	BIT 44				
E9-19	E13-18		A6	4	BIT 45				
E9-23	E14-6		A7	3	BIT 46				
D8-17	E14-2		A8	2	BIT 47				
E5-15		T	PI	6	BIT 69				

12160 LOC: B09 NAME: PE2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D8-19	D12-6		A1	24	BIT 48	7	T1	D7-17	
C9-1	D12-2		A2	3	BIT 49				
C9-3	D12-18		A3	5	BIT 50				
C9-17	D13-6		A4	4	BIT 51				
C9-19	D13-2		A5	1	BIT 52				
C9-23	D13-18		A6	2	BIT 53				
B8-1	D14-6		A7	23	BIT 54				
B8-3	D14-2		A8	22	BIT 55				
C5-13		T	PI	6	BIT 70				

12160 LOC: B10 NAME: PE3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B8-17	C12-6		A1	3	BIT 56	7	T1	D7-19	
B8-19	C12-2		A2	4	BIT 57				
B8-23	C12-18		A3	5	BIT 58				
A9-1	C13-6		A4	2	BIT 59				
A9-3	C13-2		A5	1	BIT 60				
A9-17	C13-18		A6	23	BIT 61				
A9-19	C14-6		A7	22	BIT 62				
A9-23	C14-2		A8	24	BIT 63				
C5-15		T	PI	6	BIT 71				

12102 LOC: D07 NAME: GPE

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F9-7		T	A1	1	RDPE	8	T1	D3-19	1
			B1	2	BYTE 4	7	F1	TP-03	
F10-7		T	A2	3	RDPE	5	T2	D3-18	1
			B2	4	BYTE 5	6	F2	TP-04	
B9-7		T	A3	17	RDPE	16	T3	D3-20	1
			B3	18	BYTE 6	15	F3	TP-09	
B10-7		T	A4	19	RDPE	13	T4	D3-17	1
			B4	20	BYTE 7	14	F4	TP-08	
			A5	23	+ DISABLE	12	T5	PIC-88	
			B5	24	PAR CK	11	F5	TERM	
PIC-92		T	CX	22					

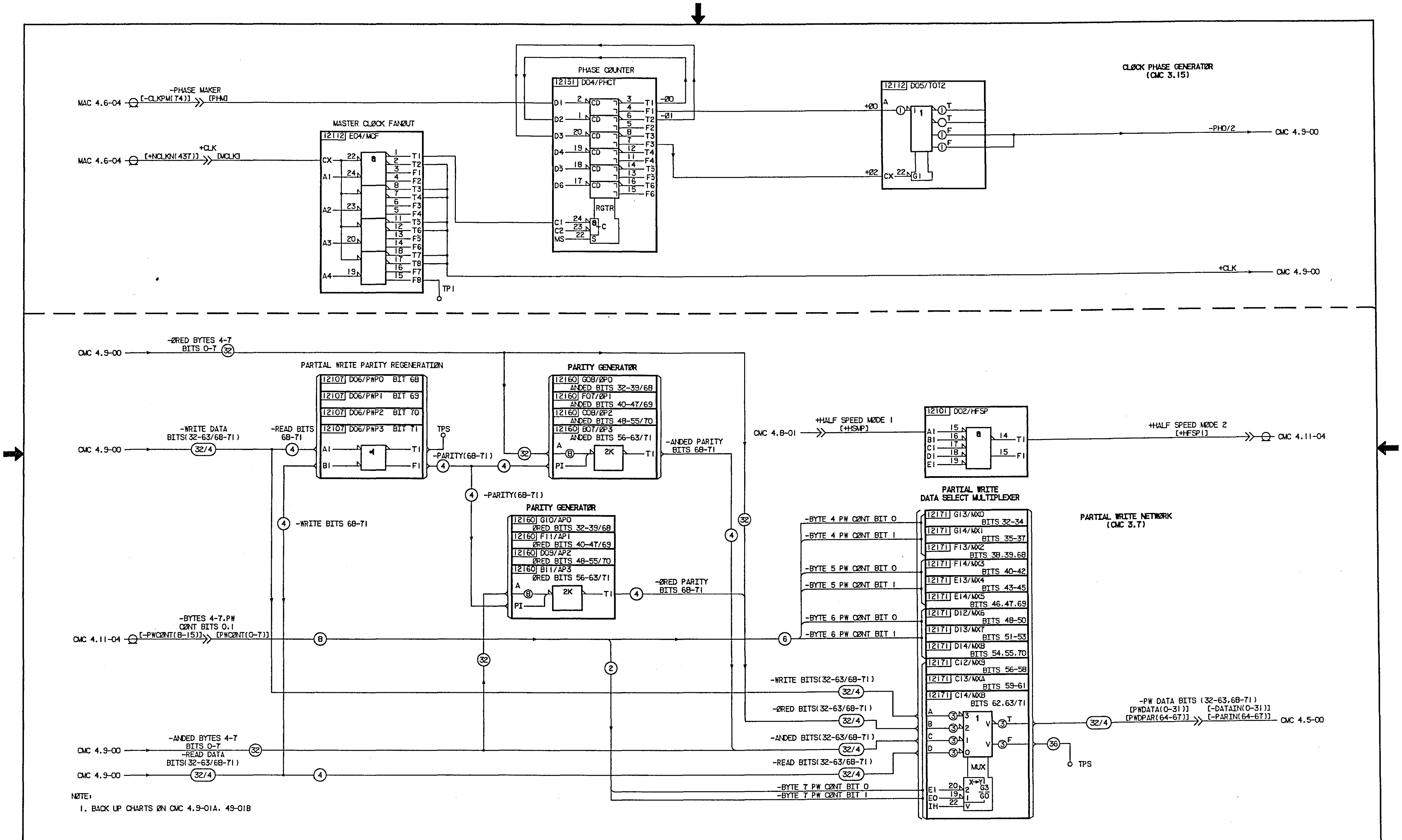
12151 LOC: D03 NAME: RPE

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D7-8		T	D1	19	RDPE	12	T1	PIC-03	
					BYTE 4	11	F1	D2-23	
D7-5		T	D2	18	RDPE	14	T2	PIC-84	
					BYTE 5	13	F2	D2-22	
D7-16		T	D3	20	RDPE	8	T3	PIC-08	
					BYTE 6	7	F3	D2-24	
D7-13		T	D4	17	RDPE	16	T4	PIC-04	
					BYTE 7	15	F4	D2-20	
			D5	1		6	T5		
						5	F5		
			D6	2		3	T6		
						4	F6		
D5-5		T	C1	24					
E4-18		T	C2	23					
			MS	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.9-00
7BXH; CIU/3X01 AD112-C

CODE IDENT		DWG NO	REV
34010	D	60458190	J
		SHEET CMC 4.9-00C	17-116



NØTE:

1. BACK UP CHARTS ØN CMC 4.9-01A. 49-01B

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM - CMC 3.7. 3.15 PARTIAL WRITE NETWØRK, CLØCK PHASE GENERATØR. TBXH:C1U/3X01	CODE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	AD112-C	SHEET CMC 4.9-01	PAGE 17-117	

12160 LOC: G08 NAME: ØP0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
G7-7	G13-4		A1	19	ØRED BIT 0	11	T1	F13-17	
G7-6	G13-24		A2	20	ØRED BIT 1				
G7-15	G13-16		A3	14	ØRED BIT 2				
G7-14	G14-4		A4	15	ØRED BIT 3				
G7-11	G14-24		A5	13	ØRED BIT 4				
F6-7	G14-16		A6	17	ØRED BIT 5				
F6-6	F13-4		A7	18	ØRED BIT 6				
F6-15	F13-24		A8	16	ØRED BIT 7				
D6-4	G10-6		P1	12	PAR 64				

12160 LOC: F07 NAME: ØP1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F6-14	F14-4		A1	14	ØRED BIT 8	11	T1	E14-17	
F6-11	F14-24		A2	13	ØRED BIT 9				
E7-7	F14-16		A3	15	ØRED BIT 10				
E7-6	E13-4		A4	17	ØRED BIT 11				
E7-15	E13-24		A5	18	ØRED BIT 12				
E7-14	E13-16		A6	19	ØRED BIT 13				
E7-11	E14-4		A7	16	ØRED BIT 14				
D8-7	E14-24		A8	20	ØRED BIT 15				
D6-6	F11-12		P1	12	PAR 65				

12160 LOC: C08 NAME: ØP2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D8-6	D12-4		A1	3	ØRED BIT 16	7	T1	D14-17	
C7-7	D12-24		A2	5	ØRED BIT 17				
C7-6	D12-16		A3	4	ØRED BIT 18				
C7-15	D13-4		A4	22	ØRED BIT 19				
C7-10	D13-24		A5	23	ØRED BIT 20				
C7-11	D13-16		A6	24	ØRED BIT 21				
B6-7	D14-4		A7	1	ØRED BIT 22				
B6-6	D14-24		A8	2	ØRED BIT 23				
D6-16	D9-12		P1	6	PAR 66				

12160 LOC: B07 NAME: ØP3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B6-15	C12-4		A1	19	ØRED BIT 24	11	T1	C14-17	
B6-14	C12-24		A2	15	ØRED BIT 25				
B6-11	C12-16		A3	20	ØRED BIT 26				
A7-7	C13-4		A4	14	ØRED BIT 27				
A7-6	C13-24		A5	13	ØRED BIT 28				
A7-15	C13-16		A6	17	ØRED BIT 29				
A7-14	C14-4		A7	18	ØRED BIT 30				
A7-11	C14-24		A8	16	ØRED BIT 31				
D6-14	B11-12		P1	12	PAR 67				

12107 LOC: D06 NAME: PWP0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E3-14	F13-15		A1	2	PAR 64	5	T1	TP-02	
E5-14	F13-18		B1	3		4	F1	G8-12	2

12107 LOC: D06 NAME: PWP1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E3-16	E14-15		A1	1	PAR 65	7	T1	TP-06	
E5-16	E14-18		B1	24		6	F1	F7-12	2

12107 LOC: D06 NAME: PWP2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C3-14	D14-15		A1	17	PAR 66	15	T1	TP-05	
C5-14	D14-18		B1	18		16	F1	C8-6	2

12107 LOC: D06 NAME: PWP3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C3-16	C14-15		A1	19	PAR 67	13	T1	TP-07	
C5-16	C14-18		B1	20		14	F1	B7-12	2

12160 LOC: G10 NAME: AP0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
G9-8	G13-5		A1	4	AND BIT 0	7	T1	F13-16	
G9-5	G13-1		A2	5	AND BIT 1				
G9-16	G13-17		A3	22	AND BIT 2				
G9-13	G14-5		A4	2	AND BIT 3				
G9-12	G14-1		A5	3	AND BIT 4				
F8-8	G14-17		A6	23	AND BIT 5				
F8-5	F13-5		A7	1	AND BIT 6				
F8-16	F13-1		A8	24	AND BIT 7				
G8-17		T	P1	6	PAR 64				

12160 LOC: F11 NAME: AP1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F8-13	F14-5		A1	19	AND BIT 8	11	T1	E14-16	
F8-12	F14-1		A2	20	AND BIT 9				
E9-8	F14-17		A3	18	AND BIT 10				
E9-5	E13-5		A4	17	AND BIT 11				
E9-16	E13-1		A5	16	AND BIT 12				
E9-13	E13-17		A6	15	AND BIT 13				
E9-12	E14-5		A7	13	AND BIT 14				
D8-16	E14-1		A8	14	AND BIT 15				
F7-12		T	P1	12	PAR 65				

12160 LOC: D09 NAME: AP2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D8-13	D12-5		A1	13	AND BIT 16	11	T1	D14-16	
C9-8	D12-1		A2	14	AND BIT 17				
C9-5	D12-17		A3	17	AND BIT 18				
C9-16	D13-5		A4	18	AND BIT 19				
C9-13	D13-1		A5	16	AND BIT 20				
C9-12	D13-17		A6	15	AND BIT 21				
B8-8	D14-5		A7	20	AND BIT 22				
B8-5	D14-1		A8	19	AND BIT 23				
C8-6		T	P1	12	PAR 66				

12160 LOC: B11 NAME: AP3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B8-16	C12-5		A1	13	AND BIT 24	11	T1	C14-16	
B8-13	C12-1		A2	14	AND BIT 25				
B8-12	C12-17		A3	15	AND BIT 26				
A9-8	C13-5		A4	16	AND BIT 27				
A9-5	C13-1		A5	20	AND BIT 28				
A9-16	C13-17		A6	19	AND BIT 29				
A9-13	C14-5		A7	18	AND BIT 30				
A9-12	C14-1		A8	17	AND BIT 31				
B7-12		T	P1	12	PAR 67				

12112 LOC: D05 NAME: TOT2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D4-4	D5-23		A1	24	Ø(0,2)	1	T1	TERM	
						2	T2	TERM	
						3	F1	C5-24	1
						4	F2	G3-24	2
D5-24	D5-20		A2	23	Ø(0,2)	8	T3	TERM	
						7	T4	TERM	
						6	F3	F3-24	2
						5	F4	D3-24	1
D5-23	D5-19		A3	20	Ø(0,2)	11	T5	TERM	
						12	T6	TERM	
						13	F5	C3-24	1
						14	F6	B3-24	2
D5-20		T	A4	19	Ø(0,2)	18	T7	TERM	
						17	T8	TERM	
						16	F7	A3-24	2
						15	F8	E3-24	2
D4-7		T	CX	22					

12171 LOC: G13 NAME: MX0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G9-2		T	A1	3	PW BIT 32	7	T1	P2B-40	
G8-19		T	B1	4		8	F1	TP-45	
G10-4		T	C1	5					
F9-1		T	D1	6					
G9-4		T	A2	23	PW BIT 33	11	T2	P2B-39	
G8-20		T	B2	24		12	F2	TP-19	
G10-5		T	C2	1					
F9-3		T	D2	2					
G9-18		T	A3	15	PW BIT 34	14	T3	P2B-38	
G8-14		T	B3	16		13	F3	TP-29	
G10-22		T	C3	17					
F9-2		T	D3	18					
G14-20	F13-20		E1	20					
G14-19	F13-19		E0	19					
			IH	22					

12171 LOC: G14 NAME: MX1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G9-20		T	A1	3	PW BIT 35	7	T1	P2B-37	
G8-19		T	B1	4		8	F1	TP-28	
G10-2		T	C1	5					
F9-24		T	D1	6					
G9-24		T	A2	23	PW BIT 36	11	T2	P2B-35	
G8-13		T	B2	24		12	F2	TP-44	
G10-3		T	C2	1					
F9-23		T	D2	2					
F8-2		T	A3	15	PW BIT 37	14	T3	P2B-34	
G8-17		T	B3	16		13	F3	TP-43	
G10-23		T	C3	17					
F9-4		T	D3	18					
PIC-174	G13-20		E1	20					
PIC-173	G13-19		E0	19					
			IH	22					

12171 LOC: F13 NAME: MX2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F8-4		T	A1	3	PW BIT 38	7	T1	P2B-33	
G8-18		T	B1	4		8	F1	TP-15	
G10-1		T	C1	5					
F9-5		T	D1	6					
F8-18		T	A2	23	PW BIT 39	11	T2	P2B-32	
G8-16		T	B2	24		12	F2	TP-16	
G10-24		T	C2	1					
F9-22		T	D2	2					
D6-2		T	A3	15	PW BIT 68	14	T3	P2B-31	
G10-7		T	B3	16		13	F3	TP-33	
G8-11		T	C3	17					
D6-3		T	D3	18					
G13-20		T	E1	20					
G13-19		T	E0	19					
			IH	22					

12171 LOC: F14 NAME: MX3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F8-20		T	A1	3	PW BIT 40	7	T1	P2B-30	
F7-14		T	B1	4		8	F1	TP-23	
F11-19		T	C1	5					
F10-24		T	D1	6					
F8-24		T	A2	23	PW BIT 41	11	T2	P2B-29	
F7-13		T	B2	24		12	F2	TP-21	
F11-20		T	C2	1					
F10-23		T	D2	2					
F9-2		T	A3	15	PW BIT 42	14	T3	P2B-28	
F7-15		T	B3	16		13	F3	TP-42	
F11-18		T	C3	17					
F10-22		T	D3	18					
PIC-178	E14-20		E1	20					
PIC-177	E14-19		E0	19					
			IH	22					

12171 LOC: E13 NAME: MX4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E9-4		T	A1	3	PW BIT 43	7	T1	P2B-27	
F7-17		T	B1	4		8	F1	TP-31	
F11-17		T	C1	5					
F10-1		T	D1	6					
E9-18		T	A2	23	PW BIT 44	11	T2	P2B-26	
F7-18		T	B2	24		12	F2	TP-26	
F11-16		T	C2	1					
F10-5		T	D2	2					
E9-20		T	A3	15	PW BIT 45	14	T3	P2B-24	
F7-19		T	B3	16		13	F3	TP-41	
F11-19		T	C3	17					
F10-4		T	D3	18					
E14-20		T	E1	20					
E14-19		T	E0	19					
			IH	22					

12171 LOC: E14 NAME: MX5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E9-24		T	A1	3	PW BIT 46	7	T1	P2B-23	
F7-16		T	B1	4		8	F1	TP-20	
F11-13		T	C1	5					
F10-3		T	D1	6					
D8-18		T	A2	23	PW BIT 47	11	T2	P2B-22	
F7-20		T	B2	24		12	F2	TP-14	
F11-14		T	C2	1					
F10-2		T	D2	2					
D6-1		T	A3	15	PW BIT 69	14	T3	P2B-21	
F11-11		T	B3	16		13	F3	TP-12	
F7-11		T	C3	17					
D6-24		T	D3	18					
F14-20	E13-20		E1	20					
F14-19	E13-19		E0	19					
			IH	22					

12171 LOC: D12 NAME: MX6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D8-20		T	A1	3	PW BIT 48	7	T1	P2B-20	
C8-3		T	B1	4		8	F1	TP-17	
D9-13		T	C1	5					
B9-24		T	D1	6					
C9-2		T	A2	23	PW BIT 49	11	T2	P2B-19	
C8-5		T	B2	24		12	F2	TP-27	
D9-14		T	C2	1					
B9-3		T	D2	2					
C9-4		T	A3	15	PW BIT 50	14	T3	P2B-18	
C8-4		T	B3	16		13	F3	TP-34	
D9-17		T	C3	17					
B9-5		T	D3	18					
D13-20		T	E1	20					
D13-19		T	E0	19					
			IH	22					

12171 LOC: D13 NAME: MX7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C9-18		T	A1	3	PW BIT 51	7	T1	P2B-17	
C8-22		T	B1	4		8	F1	TP-35	
D9-18		T	C1	5					
B9-4		T	D1	6					
C9-20		T	A2	23	PW BIT 52	11	T2	P2B-15	
C8-23		T	B2	24		12	F2	TP-37	
D9-16		T	C2	1					
B9-1		T	D2	2					
C9-24		T	A3	15	PW BIT 53	14	T3	P2B-14	
C8-24		T	B3	16		13	F3	TP-18	
D9-15		T	C3	17					
B9-2		T	D3	18					
D14-20	D12-20		E1	20					
D14-19	D12-19		E0	19					
			IH	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.9-01
78XH; CIU/3X01
AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.9-01A
17-118

12171 LOC: D14 NAME: MX8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B8-2		T	A1	3	PW BIT 54	7	T1	P2B-13	
C8-1		T	B1	4		8	F1	TP-39	
D9-20		T	C1	5					
B9-23		T	D1	6					
B8-4		T	A2	23	PW BIT 55	11	T2	P2B-12	
C8-2		T	B2	24		12	F2	TP-30	
D9-19		T	C2	1					
B9-22		T	D2	2					
D6-17		T	A3	15	PW BIT 70	14	T3	P2B-11	
D9-11		T	B3	16		13	F3	TP-32	
C8-7		T	C3	17					
D6-18		T	D3	18					
PIC-182	D13-20		E1	20					
PIC-181	D13-19		E0	19					
			IH	22					

12171 LOC: C12 NAME: MX9

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B8-18		T	A1	3	PW BIT 56	7	T1	P2B-10	
B7-19		T	B1	4		8	F1	TP-25	
B11-13		T	C1	5					
B10-3		T	D1	6					
B8-20		T	A2	23	PW BIT 57	11	T2	P2B-09	
B7-15		T	B2	24		12	F2	TP-36	
B11-14		T	C2	1					
B10-4		T	D2	2					
B8-24		T	A3	15	PW BIT 58	14	T3	P2B-08	
B7-20		T	B3	16		13	F3	TP-24	
B11-15		T	C3	17					
B10-5		T	D3	18					
C13-20		T	E1	20					
C13-19		T	E0	19					
			IH	22					

12171 LOC: C13 NAME: MXA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A9-2		T	A1	3	PW BIT 59	7	T1	P2B-07	
B7-14		T	B1	4		8	F1	TP-38	
B11-16		T	C1	5					
B10-2		T	D1	6					
A9-4		T	A2	23	PW BIT 60	11	T2	P2B-06	
B7-13		T	B2	24		12	F2	TP-22	
B11-20		T	C2	1					
B10-1		T	D2	2					
A9-18		T	A3	15	PW BIT 61	14	T3	P2B-04	
B7-17		T	B3	16		13	F3	TP-10	
B11-19		T	C3	17					
B10-23		T	D3	18					
C14-20	C12-20		E1	20					
C14-19	C12-19		E0	19					
			IH	22					

12171 LOC: C14 NAME: MXB

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A9-20		T	A1	3	PW BIT 62	7	T1	P2B-03	
B7-18		T	B1	4		8	F1	TP-40	
B11-18		T	C1	5					
B10-22		T	D1	6					
A9-24		T	A2	23	PW BIT 63	11	T2	P2B-02	
B7-16		T	B2	24		12	F2	TP-13	
B11-17		T	C2	1					
B10-24		T	D2	2					
D6-19		T	A3	15	PW BIT 71	14	T3	P2B-01	
B11-11		T	B3	16		13	F3	TP-11	
B7-11		T	C3	17					
D6-20		T	D3	18					
PIC-186	C13-20		E1	20					
PIC-185	C13-19		E0	19					
			IH	22					

CONTROL DATA CORPORATION ARDEN HILLS OPERATIONS	LEVEL 4 BACKUP CHART SUPPLEMENTAL WIRING INFORMATION CMC 4.9-01 7BXH; CIU/3X01 AD112-C	CODE IDENT 34010	D	DWG NO 60458190 SHEET CMC 4.9-01B	REV J 17-119

LEFT ZIF △1

BIT NAME		I/Ø	SHEET CMC 4.9-	TYPE	VIRTUAL PIN	REAL PIN
PWTWD(0)	TCMWD(32)	I	00	D	X24	P2A-40
PWFWD(0)	(32)				48	39
(1)	(33)				25	35
(1)	(33)				49	34
(2)	(34)				26	37
(2)	(34)				4A	38
(3)	(35)				27	31
(3)	(35)				4B	30
(4)	(36)				28	33
(4)	(36)				4C	32
(5)	(37)				29	28
(5)	(37)				4D	29
(6)	(38)				2A	27
(6)	(38)				4E	26
(7)	(39)				2B	23
(7)	(39)				4F	24
(8)	(40)				2C	20
(8)	(40)				50	19
(9)	(41)				2D	22
(9)	(41)				51	21
(10)	(42)				2E	15
(10)	(42)				52	14
(11)	(43)				2F	17
(11)	(43)				53	18
(12)	(44)				30	10
(12)	(44)				54	11
(13)	(45)				31	04
(13)	(45)				55	03
(14)	(46)				32	06
(14)	(46)				56	P2A-07
(15)	(47)				33	P1A-40
(15)	(47)				57	39
(16)	(48)				34	38
(16)	(48)				58	P1A-37
(17)	(49)				35	P2A-02
(17)	(49)				59	P2A-01
(18)	(50)				36	P1A-28
(18)	(50)				5A	29
(19)	(51)				37	27
(19)	(51)				5B	26
(20)	(52)				38	31
(20)	(52)				5C	30
(21)	(53)				39	23
(21)	(53)				5D	24
(22)	(54)				3A	21
(22)	(54)				5E	22
(23)	(55)				3B	17
(23)	(55)				5F	18
(24)	(56)				3C	15
(24)	(56)				60	14
(25)	(57)				3D	20
(25)	(57)				61	19
(26)	(58)				3E	12
(26)	(58)				62	13
(27)	(59)				3F	10
(27)	(59)				63	11
(28)	(60)				40	08
(28)	(60)				64	09
(29)	(61)				41	07
(29)	(61)				65	06
(30)	(62)				42	01
(30)	(62)				66	02
PWTWD(31)	(63)				43	04
PWFWD(31)	TCMWD(63)				67	P1A-03
PWTWP(64)	TCMWP(68)				44	P2A-13
PWFWP(64)	FCMWP(68)				68	12
(65)	(69)				45	09
(65)	(69)				69	P2A-08
(66)	(70)				46	P1A-34
(66)	(70)				6A	35
PWTWP(67)	(71)				47	33
PWFWP(67)	FCMWR(71)	I	00	D	X6B	P1A-32

ZIF GRØUND PINS			
P1A-05	P1A-25	P2A-05	P2A-25
P1A-16	P1A-36	P2A-16	P2A-36

CØAX △1

BIT NAME		I/Ø	SHEET CMC 4.9-	TYPE	VIRTUAL PIN	REAL PIN
PWCØNT(0)	PWCØNT (8)	I	01	C	X6E	P1C-174
(1)	(9)				6F	173
(2)	(10)				70	178
(3)	(11)				71	177
(4)	(12)				72	182
(5)	(13)				73	181
(6)	(14)				74	186
PWCØNT(7)	PWCØNT (15)		01		75	185
DPC	EC2OFØ (2)		00		76	092
MCK	NCLKN (437)		01		6C	012
PHM	CLKPM (74)		01		6D	091
RDATA(0)	RDATA (32)		00		00	080
(1)	(33)				01	079
(2)	(34)				02	076
(3)	(35)				03	075
(4)	(36)				04	072
(5)	(37)				05	071
(6)	(38)				06	068
(7)	(39)				07	067
(8)	(40)				08	064
(9)	(41)				09	063
(10)	(42)				0A	060
(11)	(43)				0B	059
(12)	(44)				0C	056
(13)	(45)				0D	055
(14)	(46)				0E	052
(15)	(47)				0F	051
(16)	(48)				10	043
(17)	(49)				11	044
(18)	(50)				12	039
(19)	(51)				13	040
(20)	(52)				14	031
(21)	(53)				15	032
(22)	(54)				16	027
(23)	(55)				17	028
(24)	(56)				18	023
(25)	(57)				19	024
(26)	(58)				1A	019
(27)	(59)				1B	020
(28)	(60)				1C	015
(29)	(61)				1D	016
(30)	(62)				1E	011
RDATA(31)	(63)				1F	007
RDPAR(0)	(68)				20	047
(1)	(69)				21	048
(2)	(70)				22	035
RDPAR(3)	RDATA (71)	I			23	036
RDPEØ	NU	Ø			C8	087
RDPE	RDPE	Ø			C9	083
RDPEI	RDPEØ	I			77	098
RDPERR(0)	PTCD18(2)	Ø			CA	003
(1)	ADRS18(6)				CB	084
(2)	ADRS18(7)				CC	008
RDPERR(3)	ADRS18(8)				CD	004
DISPC	DPC	Ø	00	C	XCE	P1C-088
HSMP	HFSP1	I	01	C	XCF	P1C-097
HFSP1	NU	Ø	01	C	XD0	P1C-101

RIGHT ZIF △1

BIT NAME		I/Ø	SHEET CMC 4.9-	TYPE	VIRTUAL PIN	REAL PIN
PWDATA(0)	DATAIN(32)	Ø	01	Z	XA4	P2B-40
(1)	(33)				A5	39
(2)	(34)				A6	38
(3)	(35)				A7	37
(4)	(36)				A8	35
(5)	(37)				A9	34
(6)	(38)				AA	33
(7)	(39)				AB	32
(8)	(40)				AC	30
(9)	(41)				AD	29
(10)	(42)				AE	28
(11)	(43)				AF	27
(12)	(44)				B0	26
(13)	(45)				B1	24
(14)	(46)				B2	23
(15)	(47)				B3	22
(16)	(48)				B4	20
(17)	(49)				B5	19
(18)	(50)				B6	18
(19)	(51)				B7	17
(20)	(52)				B8	15
(21)	(53)				B9	14
(22)	(54)				BA	13
(23)	(55)				BB	12
(24)	(56)				BC	10
(25)	(57)				BD	09
(26)	(58)				BE	08
(27)	(59)				BF	07
(28)	(60)				C0	06
(29)	(61)				C1	04
(30)	(62)				C2	03
PWDATA(31)	DATAIN (63)				C3	02
PWDPAR(64)	PARIN (68)				C4	31
(65)	(69)				C5	21
(66)	(70)				C6	11
PWDPAR(67)	PARIN (71)		01		C7	P2B-01
RDDATA(0)	RDDATA (32)		00		80	P1B-40
(1)	(33)				81	39
(2)	(34)				82	38
(3)	(35)				83	37
(4)	(36)				84	35
(5)	(37)				85	34
(6)	(38)				86	33
(7)	(39)				87	32
(8)	(40)				88	30
(9)	(41)				89	29
(10)	(42)				8A	28
(11)	(43)				8B	27
(12)	(44)				8C	26
(13)	(45)				8D	24
(14)	(46)				8E	23
(15)	(47)				8F	22
(16)	(48)				90	20
(17)	(49)				91	19
(18)	(50)				92	18
(19)	(51)				93	17
(20)	(52)				94	15
(21)	(53)				95	14
(22)	(54)				96	13
(23)	(55)				97	12
(24)	(56)				98	10
(25)	(57)				99	09
(26)	(58)				9A	08
(27)	(59)				9B	07
(28)	(60)				9C	06
(29)	(61)				9D	04
(30)	(62)				9E	03
(31)	(63)				9F	02
(64)	(68)				A0	31
(65)	(69)				A1	21
(66)	(70)				A2	11
RDDATA(67)	RDDATA (71)	Ø	00	Z	XA3	P1B-01

ZIF GRØUND PINS			
P1B-05	P1B-25	P2B-05	P2B-25
P1B-16	P1B-36	P2B-16	P2B-36

NØTE:

△1 CØNNECTØR TYPES:

C = CØAX
D = DIFFERENTIAL
Z = ZIF TØ FØIL ØN INTERCØNNECT BØARD

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

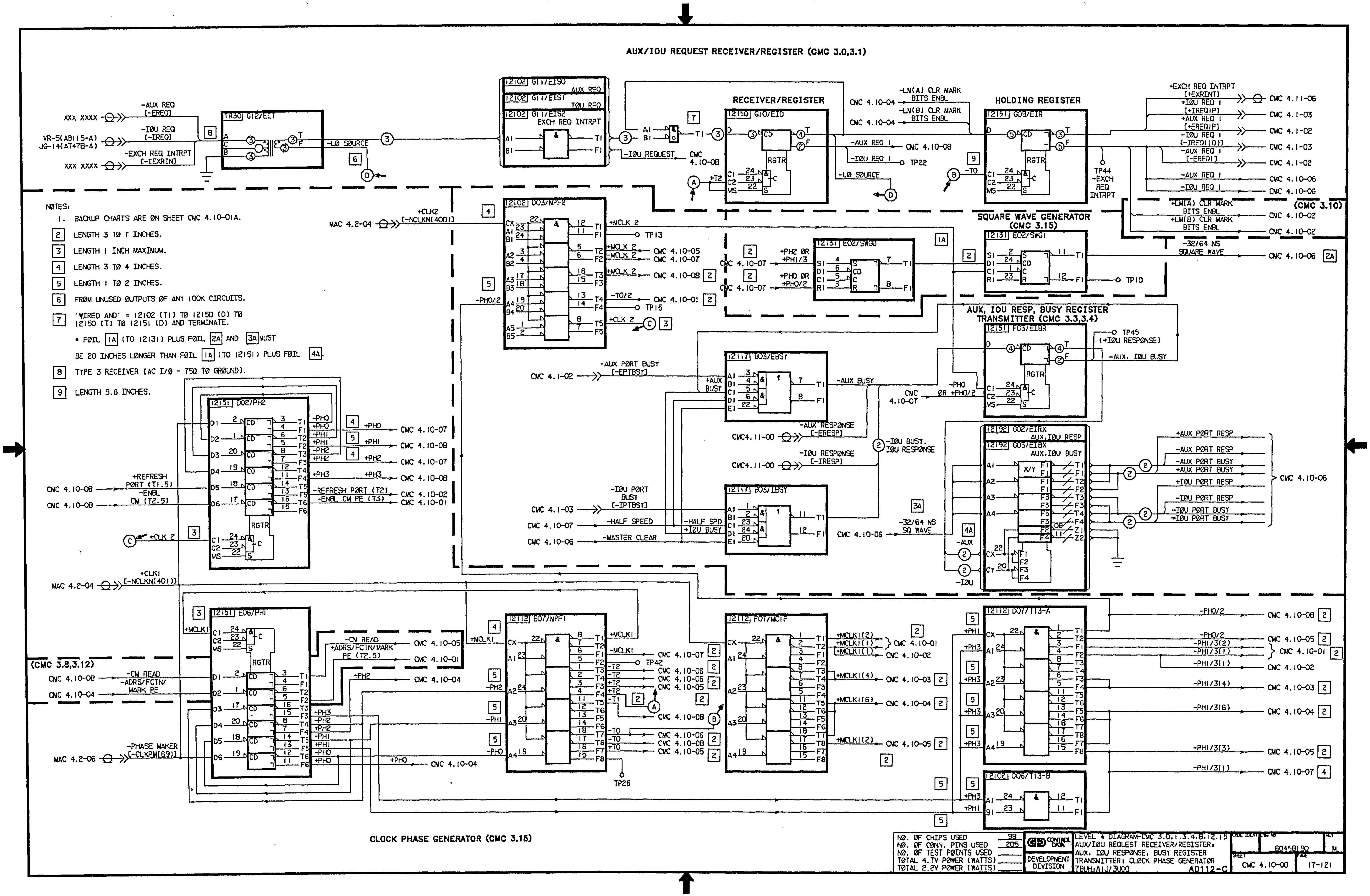
LEVEL 4 CØNNECTØR CHART
SUPPLEMENTAL WIRING INFØRMATIØN

TBXH:CIU/3X01

AD112-C

CØDE IDENT | DWG NØ 60458190 | REV J

SHEET CMC 4.9-CC | PAGE 17-120



NOTES:

1. BACKUP CHARTS ARE ON SHEET CMC 4.10-01A.

2 LENGTH 3 TO T INCHES.

3 LENGTH 1 INCH MAXIMUM.

4 LENGTH 3 TO 4 INCHES.

5 LENGTH 1 TO 2 INCHES.

6 FROM UNUSED OUTPUTS OF ANY 100K CIRCUITS.

7 'WIRED AND' = 12102 (T1) TO 12150 (D) TO 12150 (T) TO 12151 (D) AND TERMINATE.

• FOIL 1A (TO 12131) PLUS FOIL 2A AND 3A MUST BE 20 INCHES LONGER THAN FOIL 1A (TO 12151) PLUS FOIL 4A.

8 TYPE 3 RECEIVER (AC I/O - 75Ω TO GROUND).

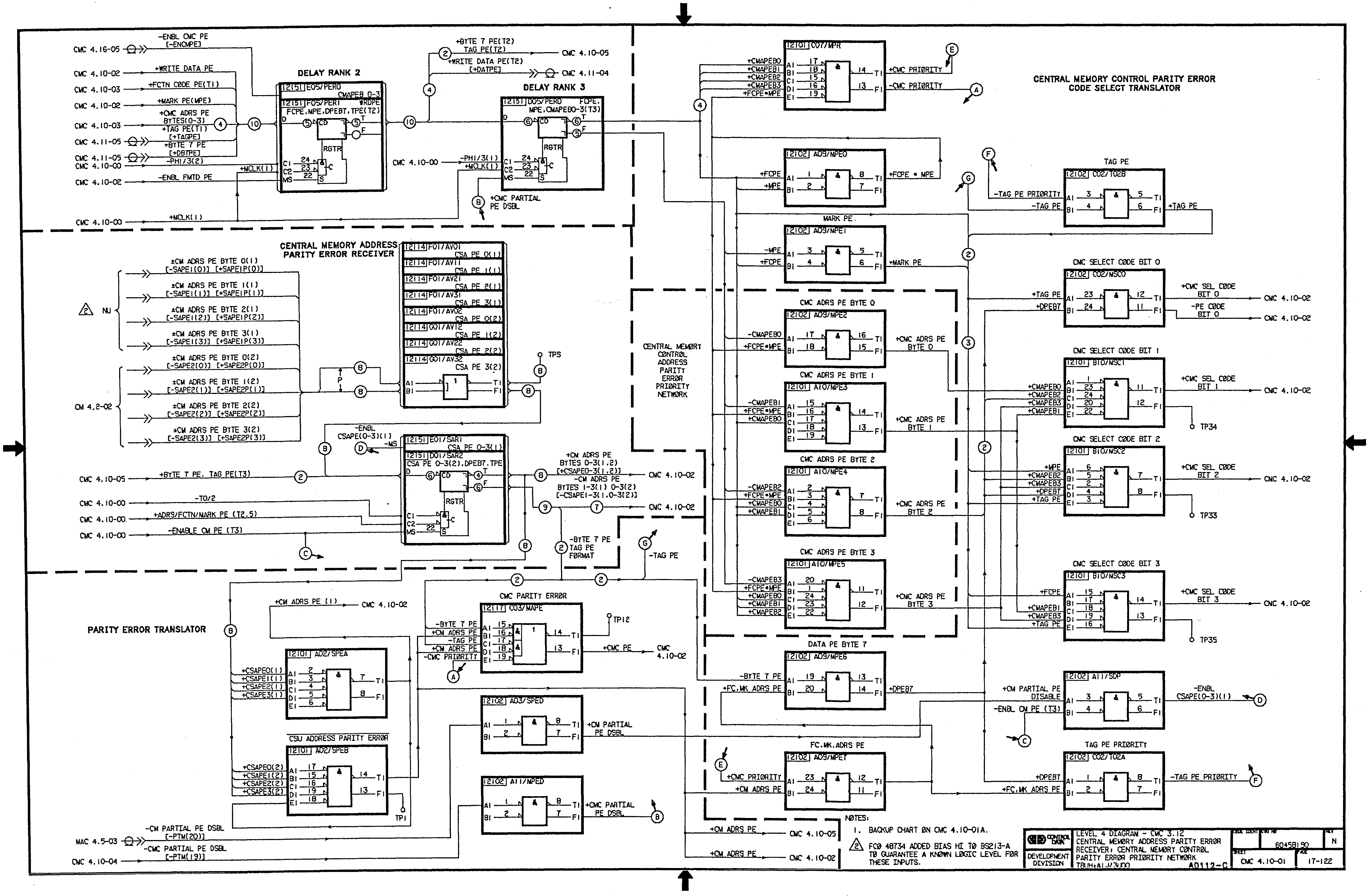
9 LENGTH 9.6 INCHES.

NO. OF CHIPS USED	98
NO. OF CONN. PINS USED	205
NO. OF TEST POINTS USED	
TOTAL 4.TV POWER (WATTS)	
TOTAL 2.2V POWER (WATTS)	

CONTROL DATA
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.0,1,3,4,8,12,15
AUX/IOU REQUEST RECEIVER/REGISTER,
AUX, IOU RESPONSE, BUSY REGISTER
TRANSMITTER, CLOCK PHASE GENERATOR
7BUH,A1J/3U00 AD112-C

DWG NO 60458190 REV M
SHEET CMC 4.10-00 PAGE 17-121



NOTES:

1. BACKUP CHART ON CMC 4.10-01A.

⚠2 FCO 48734 ADDED BIAS HI TO BS213-A TO GUARANTEE A KNOWN LOGIC LEVEL FOR THESE INPUTS.

CONTROL DATA
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM - CMC 3.12
CENTRAL MEMORY ADDRESS PARITY ERROR
RECEIVER, CENTRAL MEMORY CONTROL
PARITY ERROR PRIORITY NETWORK
TBUH:ALJ/3UDO
AD112-C

DWG NO 60458190
REV N
SHEET CMC 4.10-01
PAGE 17-122

TR30 LOC: G12 NAME: EIT

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-162			A1	1	ECS REQUEST	24	T1	G11-1	
			C1	2		23	F1	G12-8	
GND			B1	3					
PIC-157			A2	6	IOU REQUEST	7	T2	G11-23	
			C2	5		8	F2	G12-11	
GND			B2	4					
PIC-154			A3	13	EXCH REQ INTRPT	12	T3	G11-17	
			C3	14		11	F3	G10-12	
GND			B3	15					
			A4	18		19	T4		
			C4	17		20	F4		
			B4	16					

12102 LOC: G11 NAME: EIS0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G12-24		T	A1	1	ECS REQUEST	8	T1	G10-2	
			B1	2		7	F1	TERM	

12102 LOC: G11 NAME: EIS1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G12-7		T	A1	23	IOU REQUEST	12	T1	G10-1	
			B1	24		11	F1	C13-01	

12102 LOC: G11 NAME: EIS2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G12-12		T	A1	17	EXCH REQ INTRPT	16	T1	G10-20	
			B1	18		15	F1	TERM	

12150 LOC: G10 NAME: EID

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G11-8	G10-3		D1	2	ECS REQUEST	3	T1	G9-2	
						4	F1	C01-22	
G11-12	G10-6		D2	1	IOU REQUEST	6	T2	G9-1	
						5	F2	TP-22	
G11-16	G10-8		D3	20	EXCH REQ INTRPT	8	T3	G9-20	
						7	F3	TERM	
			D4	19	LO SOURCE	12	T4	G12-11(TERM)	
						11	F4	TERM	
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
E7-04	G10-22		C1	23					
			C2	24					
G10-23		T	MS	22					

12151 LOC: G09 NAME: EIR

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G10-3		T	D1	2	ECS REQUEST	3	T1	P1A-27	
						4	F1	B9-3	3
G10-6		T	D2	1	IOU REQUEST	6	T2	P1B-18	
						5	F2	B9-24	3
G10-8		T	D3	20	EXCH REQ INTRPT	8	T3	P1C-16	
						7	F3	TP-44	
C13-12		T	D4	19	$P3_A$ CLR MK BITS EN	12	T4	TERM	
						11	F4	D6-17	1
G11-13		T	D5	18	$P3_B$ CLR MK BITS EN	14	T5	TERM	
						13	F5	D6-18	1
			D6	17		16	T6		
						15	F6		
F7-18		T	C1	24					
			C2	23					
			MS	22					

12151 LOC: F03 NAME: EIBR

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B3-7		T	D1	2	ECS BUSY	3	T1	G3-22	1
						4	F1	B3-5	1
B03-11		T	D2	1	IOU BUSY	6	T2	G3-20	1
						5	F2	B03-24	
PIC-36		T	D3	20	ECS RESP	8	T3	G2-22	1
						7	F3	TERM	
PIC-35		T	D4	19	IOU RESP	12	T4	G2-20	1
						11	F4	TP-45	
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
E2-1		T	C1	24					
C3-12		T	C2	23					
			MS	22					

12192 LOC: G02 NAME: EIRX

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F2-17	G2-2		A1	1	ECS RESP	7	T1	G2-5	
						6	F1	G2-4	
G2-1	G2-18		A2	2	ECS RESP	5	T2	G4-6	
						4	F2	G4-4	
G2-2	G2-17		A3	18	IOU RESP	12	T3	G2-14	
						13	F3	G2-15	
G2-18		T	A4	17	IOU RESP	14	T4	G4-18	
						15	F4	G4-16	
					GND	8	Z1	G2-9	
					GND	11	Z2	G2-10	
F3-8		T	CX	22					
F3-12		T	CY	20					

12192 LOC: G03 NAME: EIBX

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G3-18	G3-2		A1	1	ECS BUSY	7	T1	G3-5	
						6	F1	G3-4	
G3-1		T	A2	2	ECS BUSY	5	T2	G4-1	
						4	F2	G4-3	
G3-17	G3-1		A3	18	IOU BUSY	12	T3	G3-14	
						13	F3	G3-15	
F2-18	G3-18		A4	17	IOU BUSY	14	T4	G4-13	
						15	F4	G4-15	
					GND	8	Z1	G3-9	
					GND	11	Z2	G3-10	
F3-3		T	CX	22					
F3-6		T	CY	20					

LOGIC IS ON SHEET CMC 4.10-00

12151 LOC: E05 NAME: PER0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			D1	2		3	T1		1
						4	F1	TERM	
			D2	1		6	T2		1
						5	P2	TERM	
D10-6		T	D3	20	CMAPEB0 (T2)	8	T3	D5-20	1
						7	F3	TERM	
D10-8		T	D4	19	CMAPEB1 (T2)	12	T4	D5-19	1
						11	F4	TERM	
D10-12		T	D5	18	CMAPEB2 (T2)	14	T5	D5-18	1
						13	F5	TERM	
D10-14		T	D6	17	CMAPEB3 (T2)	16	T6	D5-17	1
						15	F6	TERM	
F5-24		T	C1	24					
F5-23		T	C2	23					
PIC-007		T	MS	22					

12151 LOC: F05 NAME: PER1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-60		T	D1	2	DPEB7 (T2)	3	T1	D4-2	1
						4	F1	TERM	
PIC-59		T	D2	1	TPE (T2)	6	T2	D4-1	1
						5	F2	TERM	
G06-11		T	D3	20	DATA PE (T2)	8	T3	PIC-51	
						7	F3	TERM	
			D4	19		12	T4		
						11	F4		
D08-16		T	D5	18	FCPE (T2)	14	T5	D5-2	
						13	F5	TERM	
G13-2		T	D6	17	MPE (T2)	16	T6	D5-1	
						15	F6	TERM	
D7-3	E5-24		C1	24					
F7-1	E5-23		C2	23					
G08-11		T	MS	22					

12151 LOC: D05 NAME: PERD

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E05-3		T	D1	2	FCPE (T3)	3	T1	A9-4	3
						4	F1	TERM	
E05-6		T	D2	1	MPE (T3)	6	T2	A9-2	1
						5	F2	A9-3	1
E5-8		T	D3	20	CMAPEB0 (T3)	8	T3	C7-17	1
						7	F3	A9-17	1
E5-12		T	D4	19	CMAPEB1 (T3)	12	T4	C7-18	1
						11	F4	A10-15	1
E5-14		T	D5	18	CMAPEB2 (T3)	14	T5	C7-15	1
						13	F5	A10-2	1
E5-16		T	D6	17	CMAPEB3 (T3)	16	T6	C7-16	1
						15	F6	A10-20	1
B6-24		T	C1	24					
F7-2	B6-23		C2	23					
A11-6		T	MS	22					

12114 LOC: F01 NAME: AV01

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-09		T	A1	18	CSAPE0I	15	T1	TP-09	
P2A-11		T	B1	17		16	F1	E1-2	1

12114 LOC: F01 NAME: AV11

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-14		T	A1	20	CSAPE1I	13	T1	TP-08	
P2A-16		T	B1	19		14	F1	E1-1	1

12114 LOC: F01 NAME: AV21

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-15		T	A1	24	CSAPE2I	11	T1	TP-07	
P2A-17		T	B1	23		12	F1	E1-20	1

12114 LOC: F01 NAME: AV31

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-20		T	A1	2	CSAPE3I	7	T1	TP-06	
P2A-22		T	B1	1		8	F1	E1-19	1

12114 LOC: F01 NAME: AV02

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-19		T	A1	4	CSAPE0 II	5	T1	TP-03	
P2A-21		T	B1	3		6	F1	D1-2	1

12114 LOC: G01 NAME: AV12

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-24		T	A1	24	CSAPE 1 II	11	T1	TP-02	
P2A-26		T	B1	23		12	F1	D1-1	1

12114 LOC: G01 NAME: AV22

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-25		T	A1	20	CSAPE 2 II	13	T1	TP-05	
P2A-27		T	B1	19		14	F1	D1-20	1

12114 LOC: G01 NAME: AV32

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-29		T	A1	18	CSAPE 3 II	15	T1	TP-04	
P2A-31		T	B1	17		16	F1	D1-19	1

12151 LOC: E01 NAME: SAR1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F1-16		T	D1	2	CSAPE 0 I	3	T1	A2-2	3
						4	F1	TERM	
F1-14		T	D2	1	CSAPE 1 I	6	T2	A2-3	4
						5	F2	A3-3	1
F1-12		T	D3	20	CSAPE 2 I	8	T3	A2-4	2
						7	F3	A5-4	1
F1-8		T	D4	19	CSAPE 3 I	12	T4	A2-5	1
						11	F4	A2-22	1
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
D3-13	D1-24		C1	24					
E06-05	D1-23		C2	23					
A11-5		T	MS	22					

12151 LOC: D01 NAME: SAR2

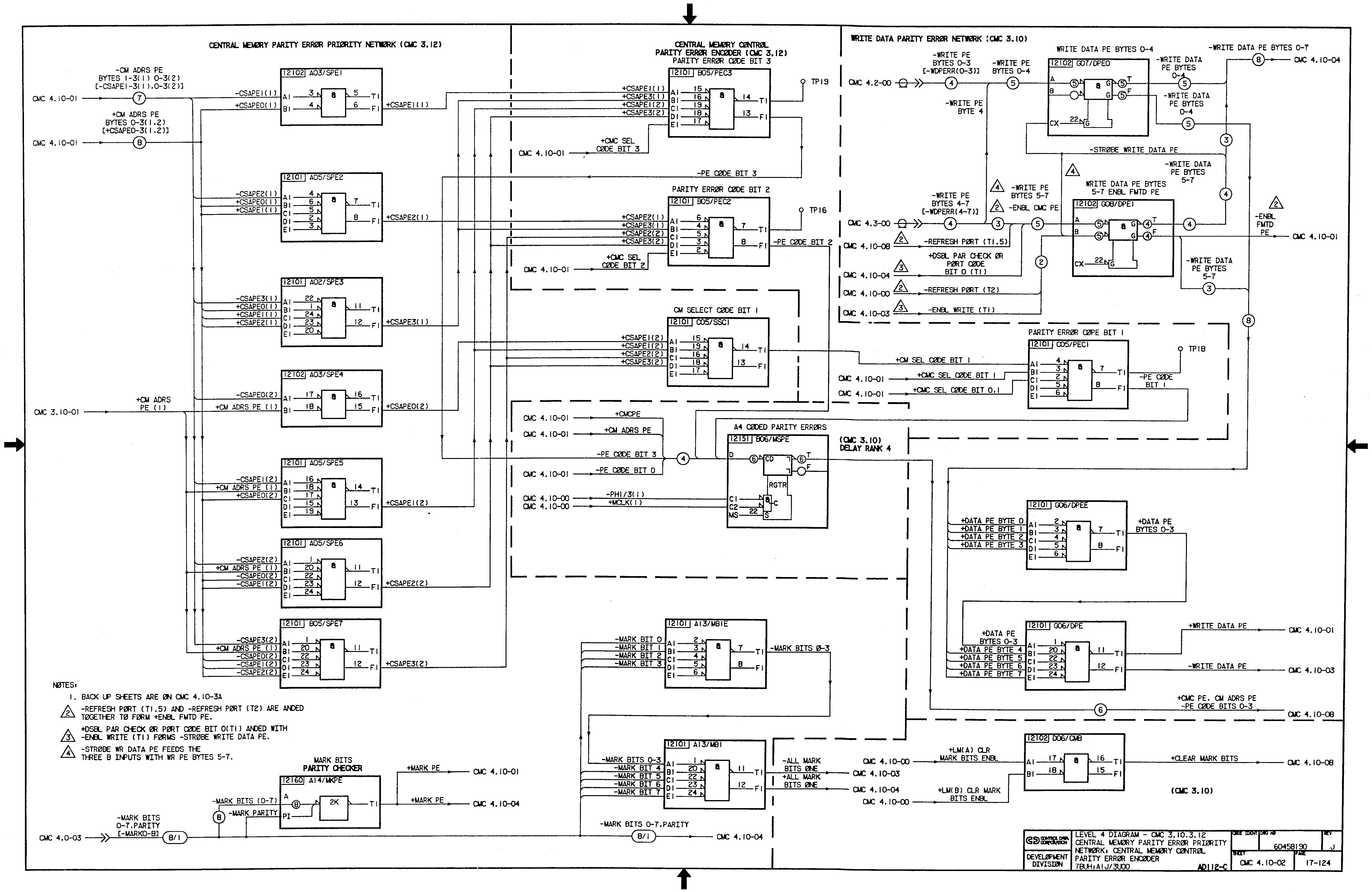
SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F1-6		T	D1	2	CSAPE 0 II	3	T1	A2-17	3
						4	F1	A3-17	1
G1-12		T	D2	1	CSAPE 1 II	6	T2	A2-15	4
						5	F2	A5-16	1
G1-14		T	D3	20	CSAPE 2 II	8	T3	A2-16	2
						7	F3	A5-1	1
G1-16		T	D4	19	CSAPE 3 II	12	T4	A2-19	1
						11	F4	B5-1	1
D4-3		T	D5	18	DPEB7	14	T5	TERM	
						13	F5	C3-15	
D4-6		T	D6	17	TPE	16	T6	TERM	
						15	F6	C3-17	
E1-24		T	C1	24					
E01-23		T	C2	23					
D02-16	A11-4		MS	22					

LOGIC IS ON SHEET CMC 4.10-01

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.10-00, 4.10-01
7BUH; A1J/3U00 AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV M
SHEET CMC 4.10-01A
17-123



NOTES:

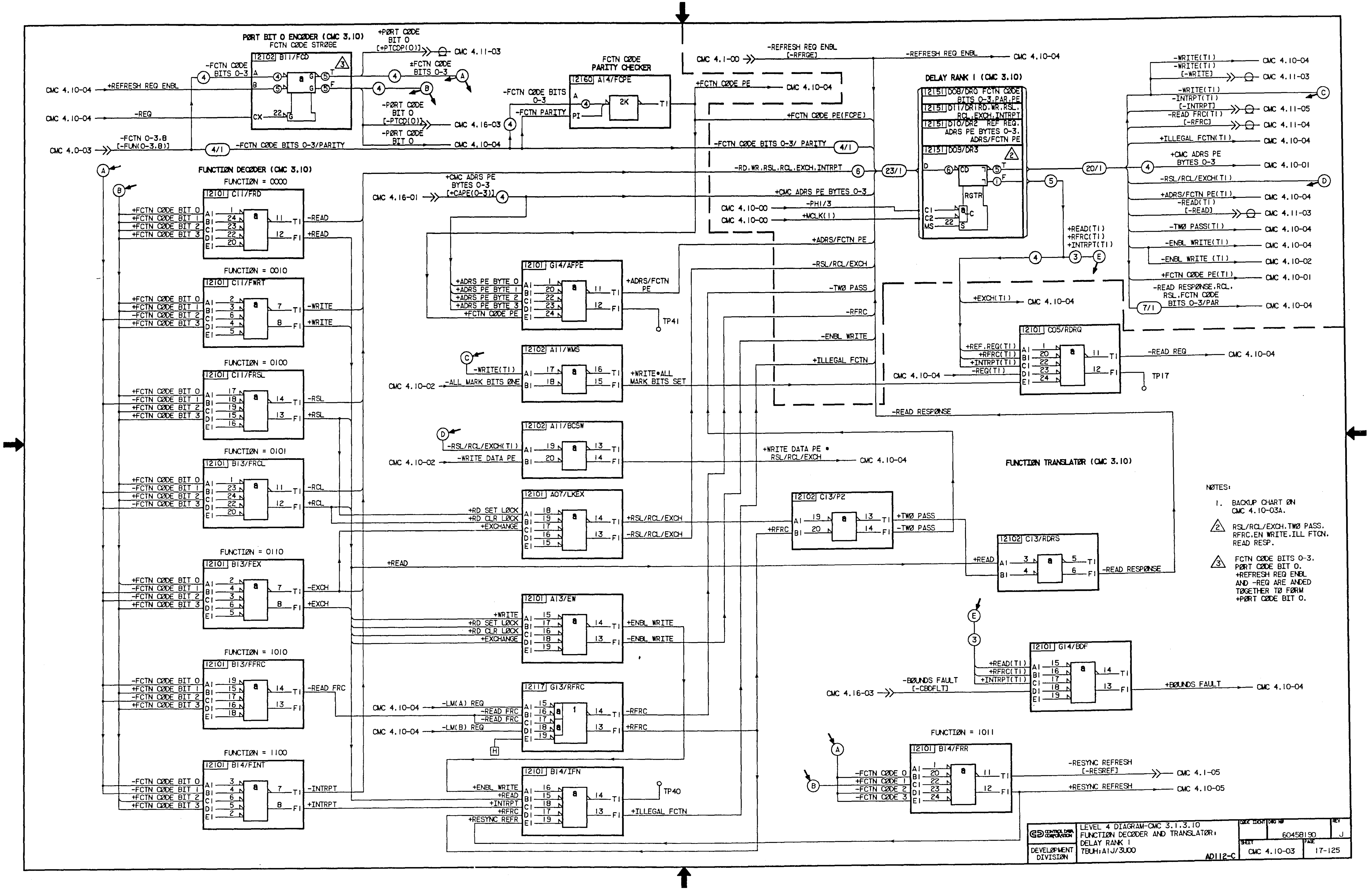
1. BACK UP SHEETS ARE ON CMC 4.10-3A

△2 -REFRESH PORT (T1.5) AND -REFRESH PORT (T2) ARE ANDED TOGETHER TO FORM +ENBL FMTD PE.

△3 +DSBL PAR CHECK OR PORT CODE BIT 0(T1) ANDED WITH -ENBL WRITE (T1) FORMS -STROBE WRITE DATA PE.

△4 -STROBE WR DATA PE FEEDS THE THREE B INPUTS WITH WR PE BYTES 5-7.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM - CMC 3.10.3.12 CENTRAL MEMORY PARITY ERROR PRIORITY NETWORK; CENTRAL MEMORY CONTROL PARITY ERROR ENCODER 7BUH;A1J/3U00 AD112-C	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION		SHEET CMC 4.10-02	PAGE 17-124	



NOTES:

1. BACKUP CHART ON CMC 4.10-03A.

2. RSL/RCL/EXCH.TWO PASS. RFRC.EN WRITE.ILL FTCN. READ RESP.

3. FCTN CODE BITS 0-3. PORT CODE BIT 0. +REFRESH REQ ENBL AND -REQ ARE ANDED TOGETHER TO FORM +PORT CODE BIT 0.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.1.3.10 FUNCTION DECODER AND TRANSLATOR; DELAY RANK 1 7BUH;A1J/3U00	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION	AD112-C	SHEET CMC 4.10-03	PAGE 17-125	

12160 LOC: A14 NAME: MKPE

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-03	A13-2		A1	1	MK BIT 0	7	T1	G13-2	
P1B-04	A13-3		A2	2	MK BIT 1				
P1B-06	A13-4		A3	3	MK BIT 2				
P1B-07	A13-5		A4	4	MK BIT 3				
P1B-08	A13-20		A5	5	MK BIT 4				
P1B-09	A13-22		A6	22	MK BIT 5				
P1B-10	A13-23		A7	23	MK BIT 6				
P1B-11	A13-24		A8	24	MK BIT 7				
P1B-12	E12-20		PI	6	MK PAR				

12151 LOC: B06 NAME: MSPE

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C3-13		T	D1	2	CMC	3	T1	B12-16	
					PE	4	F1	TERM	
C7-1		T	D2	1	CM	6	T2	B12-15	
					ADRSPE	5	F2	TERM	
C13-7		T	D3	20	PE CODE	8	T3	C12-16	
					BIT 0	7	F3	TERM	
C5-8		T	D4	19	PE CODE	12	T4	C12-15	
					BIT 1	11	F4	TERM	
B5-8		T	D5	18	PE CODE	14	T5	C12-14	
					BIT 2	13	F5	TERM	
B5-13		T	D6	17	PE CODE	16	T6	C12-13	
					BIT 3	15	F6	TERM	
D7-4	D5-24		C1	24					
D5-23		T	C2	23					
			MS	22					

12102 LOC: G07 NAME: DPE0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-71		T	A1	1	DATA PE	8	T1	E11-2	
			B1	2	BYTE 0	7	F1	G6-2	
PIC-67		T	A2	3	DATA PE	5	T2	E11-1	
			B2	4	BYTE 1	6	F2	G6-3	
PIC-72		T	A3	17	DATA PE	16	T3	E11-20	
			B3	18	BYTE 2	15	F3	G6-4	
PIC-75		T	A4	19	DATA PE	13	T4	E11-19	
			B4	20	BYTE 3	14	F4	G6-5	
PIC-76		T	A5	23	DATA PE	12	T5	E11-18	
			B5	24	BYTE 4	11	F5	G6-20	
G08-13	G08-4		CX	22					

12102 LOC: G08 NAME: DPE1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-101		T	A1	1	DATA PE	8	T1	E11-17	
G08-04	G08-18		B1	2	BYTE 5	7	F1	G6-22	
PIC-102		T	A2	3	DATA PE	5	T2	E8-2	
G07-22	G08-2		B2	4	BYTE 6	6	F2	G6-23	
PIC-97		T	A3	17	DATA PE	16	T3	E8-17	
G08-02		T	B3	18	BYTE 7	15	F3	G6-24	
C04-13		T	A4	23	ENABLE	12	T4	F05-22	
D02-13		T	B4	24	FMTD PE	11	F4	TERM	
C04-18		T	A5	19	STROBE	13	T5	G07-22	
D09-12	E14-19		B5	20	WR DATA PE	14	F5	TERM	
			CX	22					

LOGIC ON SHEET CMC 4.10-02

12102 LOC: B11 NAME: FCD

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	23	PORT	12	T1	PIC-134	
B11-20	B11-2		B1	24	CODE BIT 0	11	F1	E9-17	
P1A-05	A14-15		A2	1	FUNC	8	T2	B13-19	
B11-24	B11-4		B2	2	CODE BIT 0	7	F2	C11-2	5
P1A-07	A14-14		A3	3	FUNC	5	T3	C11-18	
B11-2	G6-18		B3	4	CODE BIT 1	6	F3	C11-3	3
P1A-09	A14-13		A4	17	FUNC	16	T4	B14-22	
A11-11	B11-20		B4	18	CODE BIT 2	15	F4	C11-23	4
P1A-10	A14-16		A5	19	FUNC	13	T5	B13-22	
B11-18	B11-24		B5	20	CODE BIT 3	14	F5	C11-22	6
E14-1		T	CX	22					

12160 LOC: A14 NAME: FCPE

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B11-1	D8-2		A1	15	FUNC BIT 0	11	T1	G14-24	
B11-3	D8-1		A2	14	FUNC BIT 1				
B11-17	D8-20		A3	13	FUNC BIT 2				
B11-19	D8-19		A4	16	FUNC BIT 3				
			A5	17					
			A6	18					
			A7	19					
			A8	20					
D8-18		T	PI	12	FUNC PAR				

12151 LOC: D08 NAME: DR0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A14-15		T	D1	2	FUNC	3	T1	E10-2	
					CD BIT 0	4	F1	TERM	
A14-14		T	D2	1	FUNC	6	T2	E10-1	
					CD BIT 1	5	F2	TERM	
A14-13		T	D3	20	FUNC	8	T3	E10-20	
					CD BIT 2	7	F3	TERM	
A14-16		T	D4	19	FUNC	12	T4	E10-19	
					CD BIT 3	11	F4	TERM	
P1A-12	A14-12		D5	18	FUNC	14	T5	E10-18	
					CD PAR	13	F5	TERM	
G14-24	E10-17		D6	17	FUNC	16	T6	F05-18	
					CODE PE (T1)	15	F6	TERM	
D9-24		T	C1	24					
D9-23		T	C2	23					
			MS	22					

12151 LOC: D11 NAME: DR1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C11-11		T	D1	2	RD	3	T1	PIC-138	
						4	F1	G14-15	
C11-7		T	D2	1	WR	6	T2	C13-3	
						5	F2	TERM	
C11-14		T	D3	20	RSL	8	T3	E8-20	
						7	F3	TERM	
B13-11		T	D4	19	RCL	12	T4	E8-19	
						11	F4	TERM	
B13-7		T	D5	18	EXCH	14	T5	TERM	
						13	F5	D6-2	
B14-7		T	D6	17	INTRPT	16	T6	PIC-141	
						15	F6	C5-22	
D7-5	D10-24		C1	24					
D10-23		T	C2	23					
			MS	22					

12151 LOC: D10 NAME: DR2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-10	A11-23		D1	2	REF	3	T1	TERM	3
					REQ	4	F1	C05-01	1
G14-1		T	D2	1	ADRS	6	T2	E5-20	1
					PE BYTE 0	5	F2	TERM	
G14-20		T	D3	20	ADRS	8	T3	E5-19	1
					PE BYTE 1	7	F3	TERM	
G14-22		T	D4	19	ADRS	12	T4	E5-18	1
					PE BYTE 2	11	F4	TERM	
G14-23		T	D5	18	ADRS	14	T5	E5-17	1
					PE BYTE 3	13	F5	TERM	
G14-11		T	D6	17	ADRS/	16	T6	G13-1	1
					FUNC PE	15	F6	TERM	
D11-24		T	C1	24					
F7-7	D11-23		C2	23					
			MS	22					

12151 LOC: D09 NAME: DR3

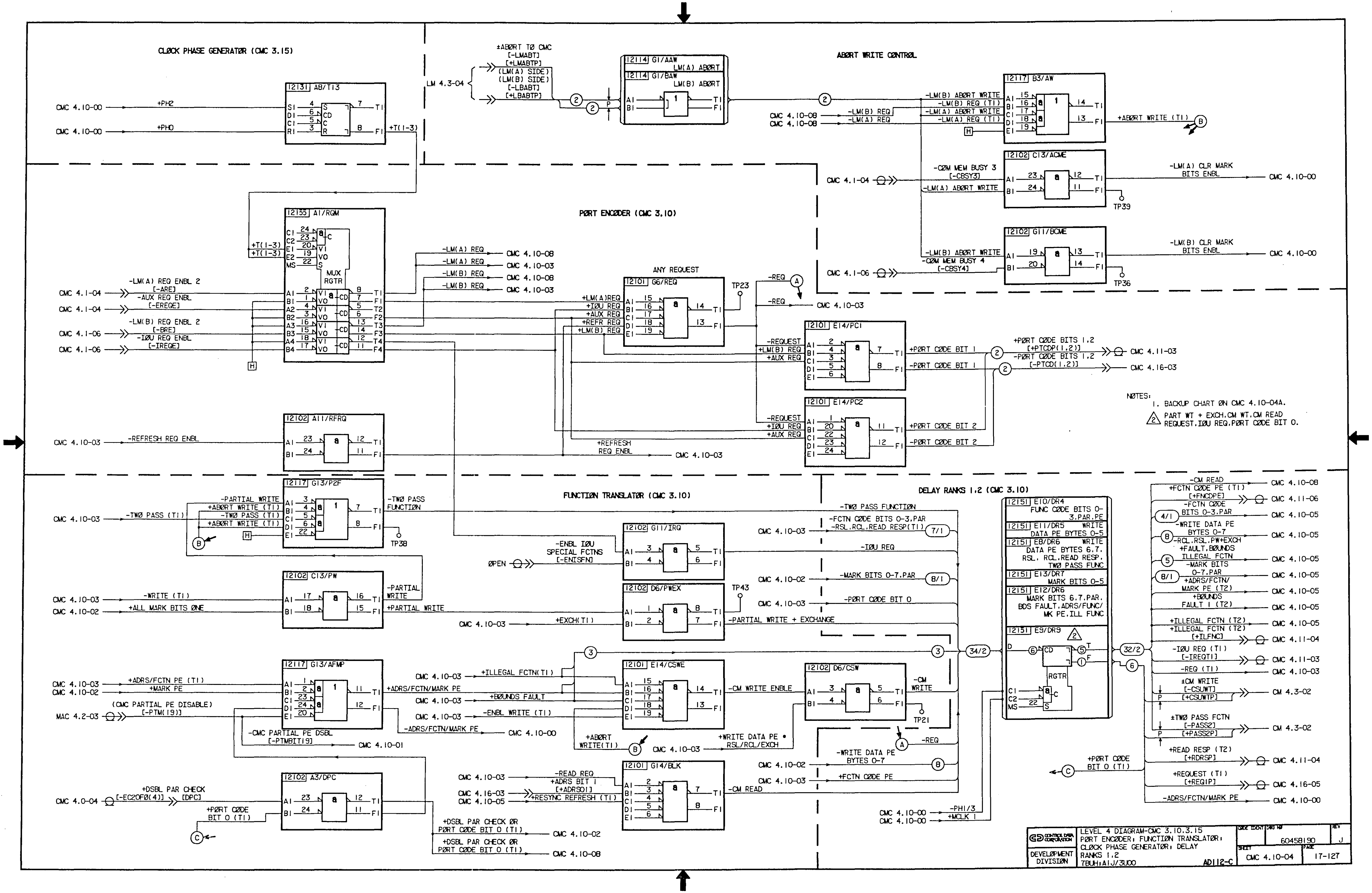
SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A7-13		T	D1	2	RSL/	3	T1	A11-19	
					RCL/EXCH	4	F1	TERM	
C13-14		T	D2	1	TWO	6	T2	G13-5	
					PASS	5	F2	TERM	
G13-14		T	D3	20	RFRC	8	T3	PIC-113	
						7	F3	C5-20	
A13-13		T	D4	19	EN	12	T4	G08-20	
					WRITE	11	F4	TERM	
B14-13		T	D5	18	ILL	14	T5	E12-17	
					FUNC	13	F5	TERM	
C13-6		T	D6	17	READ	16	T6	E8-18	
					RESP	15	F6	TERM	
D7-6	D8-24		C1	24					
F7-8	D8-23		C2	23					
			MS	22					

LOGIC ON SHEET CMC 4.10-03

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.10-02, 4.10-03
7BUH; A1J/3U00 AD112-C

CODE IDENT		DWG NO	REV
34010	D	60458190	J
		SHEET CMC 4.10-03A	17-126



NOTES:

1. BACKUP CHART ON CMC 4.10-04A.

△2 PART WT + EXCH,CM WT,CM READ REQUEST,IOU REQ,PORT CODE BIT 0.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.10,3.15
PORT ENCODER, FUNCTION TRANSLATOR, CLOCK PHASE GENERATOR, DELAY RANKS 1,2
7BUH,A1J/3U00
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.10-04	17-127

12114 LOC: G01 NAME: AAW

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-37		T	A1	4	$P3_A$ ABORT	5	T1	B3-17	2
P2A-39		T	B1	3	WRITE	6	F1	TERM	

12114 LOC: G01 NAME: BAW

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-37		T	A1	2	$P3_B$ ABORT	7	T1	G11-19	2
P2B-39		T	B1	1	WRITE	8	F1	TERM	

12151 LOC: E10 NAME: DR4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D8-3		T	D1	2	FUNC	3	T1	F13-16	1
					CD BIT 0	4	F1	TERM	
D8-6		T	D2	1	FUNC	6	T2	F13-15	1
					CD BIT 1	5	F2	TERM	
D8-8		T	D3	20	FUNC	8	T3	F13-14	1
					CD BIT 2	7	F3	TERM	
D8-12		T	D4	19	FUNC	12	T4	F13-13	1
					CD BIT 3	11	F4	TERM	
D8-14		T	D5	18	FUNC	14	T5	F14-15	1
					CD PAR	13	F5	TERM	
D08-17		T	D6	17	FUNC	16	T6	PIC-126	
					CODE PE(T1)	15	F6	TERM	
D7-14	E11-24		C1	24					
F7-12	E11-23		C2	23					
			MS	22					

12151 LOC: E11 NAME: DR5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G7-8		T	D1	2	DATA PE	3	T1	F11-16	1
					BYTE 0	4	F1	TERM	
G7-5		T	D2	1	DATA PE	6	T2	F11-15	1
					BYTE 1	5	F2	TERM	
G7-16		T	D3	20	DATA PE	8	T3	F11-14	1
					BYTE 2	7	F3	TERM	
G7-13		T	D4	19	DATA PE	12	T4	F11-13	1
					BYTE 3	11	F4	TERM	
G7-12		T	D5	18	DATA PE	14	T5	F12-16	1
					BYTE 4	13	F5	TERM	
G8-8		T	D6	17	DATA PE	16	T6	F12-15	1
					BYTE 5	15	F6	TERM	
E10-24		T	C1	24					
E10-23		T	C2	23					
			MS	22					

12151 LOC: E8 NAME: DR6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G8-5		T	D1	2	DATA PE	3	T1	F12-14	1
					BYTE 6	4	F1	TERM	
G8-16		T	D2	17	DATA PE	16	T2	F12-13	1
					BYTE 7	15	F2	TERM	
D11-8		T	D3	20	RSL	8	T3	F14-14	1
						7	F3	TERM	
D11-12		T	D4	19	RCL	12	T4	F14-13	1
						11	F4	TERM	
D9-16		T	D5	18	READ	14	T5	TERM	
					RESP(T2)	13	F5	PIC-98	
G13-7		T	D6	1	TWO PASS	6	T6	P2A-30	
					FUNC	5	F6	P2A-32	
E9-24		T	C1	24					
E9-23		T	C2	23					
			MS	22					

12151 LOC: E13 NAME: DR7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A13-2		T	D1	2	MARK	3	T1	F9-16	1
					BIT 0	4	F1	TERM	
A13-3		T	D2	1	MARK	6	T2	F9-15	1
					BIT 1	5	F2	TERM	
A13-4		T	D3	20	MARK	8	T3	F9-14	1
					BIT 2	7	F3	TERM	
A13-5		T	D4	19	MARK	12	T4	F9-13	1
					BIT 3	11	F4	TERM	
A13-20		T	D5	18	MARK	14	T5	F10-16	1
					BIT 4	13	F5	TERM	
A13-22		T	D6	17	MARK	16	T6	F10-15	1
					BIT 5	15	F6	TERM	
E12-24		T	C1	24					
E12-23		T	C2	23					
			MS	22					

12151 LOC: E12 NAME: DR8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A13-23		T	D1	2	MARK	3	T1	F10-14	1
					BIT 6	4	F1	TERM	
A13-24		T	D2	1	MARK	6	T2	F10-13	1
					BIT 7	5	F2	TERM	
A14-6		T	D3	20	MARK	8	T3	F14-16	1
					PAR	7	F3	TERM	
E14-17		T	D4	19	BDS	12	T4	F8-15	1
					FAULT	11	F4	TERM	
E14-16		T	D5	18	ADRS/FUNC/	14	T5	D6-20	2
					MK PE	13	F5	E06-01	
D9-14	E14-15		D6	17	ILL	16	T6	F8-14	
					FUNC	15	F6	TERM	
D7-16	E13-24		C1	24					
F7-18	E13-23		C2	23					
			MS	22					

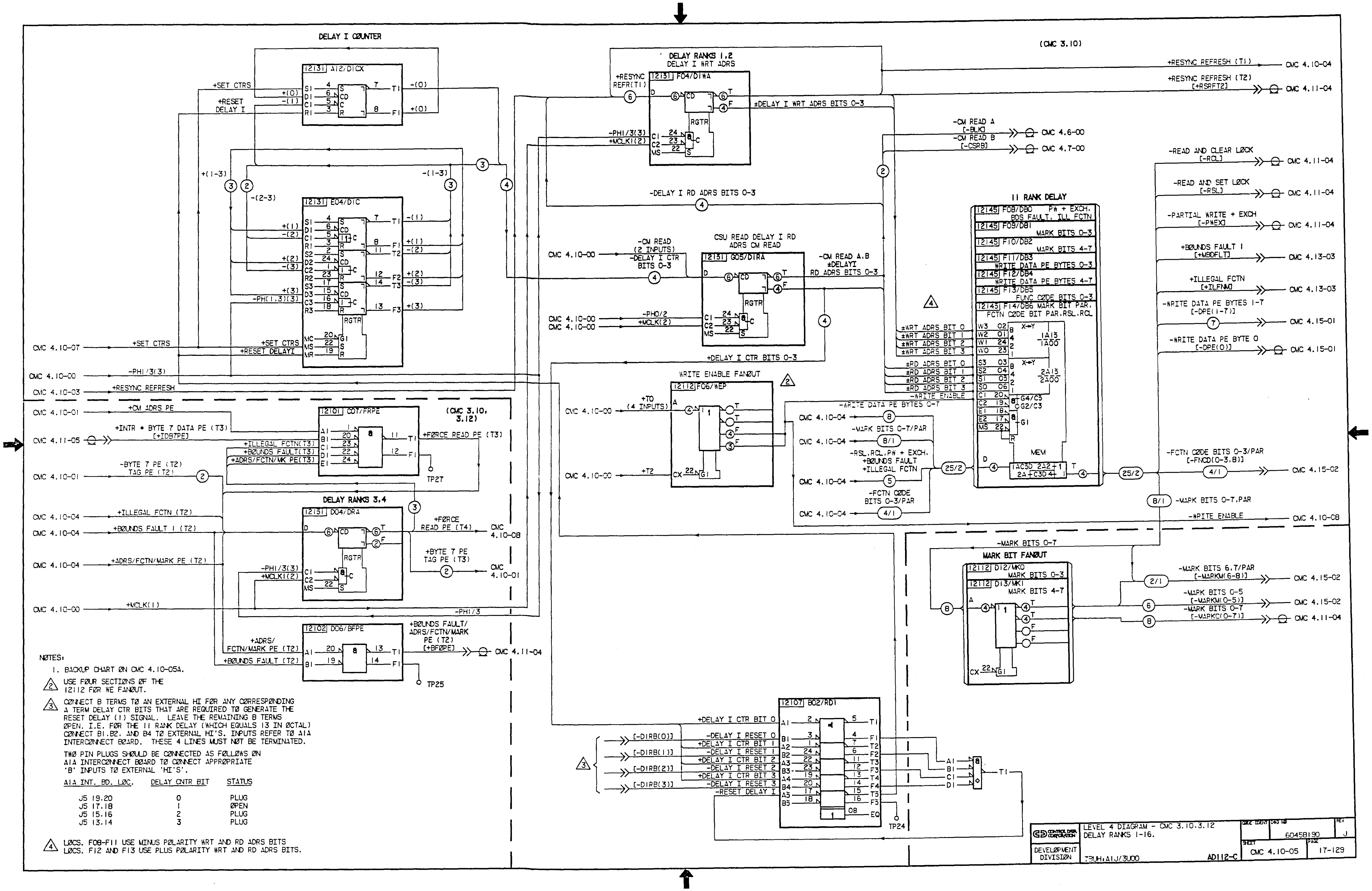
12151 LOC: E09 NAME: DR9

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D6-7		T	D1	2	PART WT	3	T1	F8-16	1
					+EXCH	4	F1	TERM	
D6-5		T	D2	1	CSU	6	T2	P2A-34	
					WT	5	F2	P2A-36	
G14-7		T	D3	20	CM	8	T3	B12-13	
					READ	7	F3	TERM	
G6-13	E14-2		D4	19	REQUEST	12	T4	C5-23	1
						11	F4	PIC-19	
G11-5		T	D5	18	IOU	14	T5	PIC-118	
					REQ	13	F5	TERM	
B11-11	P2B-10		D6	17	PORT	16	T6	TERM	
					CODE BIT 0	15	F6	A3-24	1
D7-13	E8-24		C1	24					
F7-11	E8-23		C2	23					
			MS	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.10-04
78UH; A1J/3U00
AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.10-04A
17-128


DELAY I COUNTER
12131 A12/DICX
+SET CTRS
+RESET DELAY I
DELAY RANKS 1,2
DELAY I WRT ADRS
12131 F04/DIWA
+RESYNC REFR(T1)
RGTR
-PHI/3(3)
+MCLK1(2)
+DELAY I WRT ADRS BITS 0-3
(CMC 3.10)
+RESYNC REFRESH (T1) — CMC 4.10-04
+RESYNC REFRESH (T2) [+RSRFT2] — CMC 4.11-04
-CM READ A [-BLK] — CMC 4.6-00
-CM READ B [-CSRB] — CMC 4.7-00
-READ AND CLEAR LOCK [-RCL] — CMC 4.11-04
-READ AND SET LOCK [-RSL] — CMC 4.11-04
-PARTIAL WRITE + EXCH [-PWEX] — CMC 4.11-04
+BOUNDS FAULT I [+MBDFLT] — CMC 4.13-03
+ILLEGAL FCTN [+ILFNM] — CMC 4.13-03
-WRITE DATA PE BYTES 1-7 [-DPE(1-7)] — CMC 4.15-01
-WRITE DATA PE BYTE 0 [-DPE(0)] — CMC 4.15-01
12131 E04/DIC
-DELAY I RD ADRS BITS 0-3
11 RANK DELAY
12145 F08/DB0 PW + EXCH, BDS FAULT, ILL FCTN
12145 F09/DB1 MARK BITS 0-3
12145 F10/DB2 MARK BITS 4-7
12145 F11/DB3 WRITE DATA PE BYTES 0-3
12145 F12/DB4 WRITE DATA PE BYTES 4-7
12145 F13/DB5 FUNC CODE BITS 0-3
12143 F14/DB6 MARK BIT PAR, FCTN CODE BIT PAR, RSL, RCL
CMC 4.10-00
-CM READ (2 INPUTS)
-DELAY I CTR BITS 0-3
CSU READ DELAY I RD ADRS CM READ
12131 G05/DIRA
-CM READ A,B ±DELAYI RD ADRS BITS 0-3
-PHO/2
+MCLK(2)
+DELAY I CTR BITS 0-3
CMC 4.10-07 +SET CTRS
+RESET DELAYI
CMC 4.10-00 -PHI/3(3)
CMC 4.10-03 +RESYNC REFRESH
WRITE ENABLE FANOUT
12112 F06/WEP
+T0 (4 INPUTS)
+T2
±WRT ADRS BIT 0
±WRT ADRS BIT 1
±WRT ADRS BIT 2
±WRT ADRS BIT 3
±RD ADRS BIT 0
±RD ADRS BIT 1
±RD ADRS BIT 2
±RD ADRS BIT 3
-WRITE ENABLE
1A13 1A00
2A13 2A00
G4/C3 G2/C3
MEM
1AC3D 2A2 2A 1C3D 4
-WRITE DATA PE BYTES 0-7
-MARK BITS 0-7/PAR
-RSL,RCL,PW + EXCH, +BOUNDS FAULT +ILLEGAL FCTN
-FCTN CODE BITS 0-3/PAR
CMC 4.10-04
-FCTN CODE BITS 0-3/PAR [-FNCD(0-3,8)] — CMC 4.15-02
-MARK BITS 0-7,PAR
-WRITE ENABLE — CMC 4.10-08
CMC 4.10-01 +CM ADRS PE
CMC 4.11-05 +INTR • BYTE 7 DATA PE (T3) [+IDB7PE]
12101 C07/FRPE
+ILLEGAL FCTN(T3)
+BOUNDS FAULT(T3)
+ADRS/FCTN/MK PE(T3)
+FORCE READ PE (T3)
TP27
(CMC 3.10, 3.12)
CMC 4.10-01 -BYTE 7 PE (T2) TAG PE (T2)
DELAY RANKS 3,4
12131 D04/DRA
+FORCE READ PE (T4) — CMC 4.10-08
+BYTE 7 PE TAG PE (T3) — CMC 4.10-01
CMC 4.10-04 +ILLEGAL FCTN (T2)
CMC 4.10-04 +BOUNDS FAULT I (T2)
CMC 4.10-04 +ADRS/FCTN/MARK PE (T2)
CMC 4.10-00 +MCLK(1)
-PHI/3
12102 D06/BFPE
+ADRS/FCTN/MARK PE (T2)
+BOUNDS FAULT (T2)
+BOUNDS FAULT/ ADRS/FCTN/MARK PE (T2) [+BFOPE] — CMC 4.11-04
TP25
-MARK BITS 0-7
MARK BIT FANOUT
12112 D12/MKO MARK BITS 0-3
12112 D13/MK1 MARK BITS 4-7
-MARK BITS 6,7/PAR [-MARKM(6-8)] — CMC 4.15-02
-MARK BITS 0-5 [-MARKM(0-5)] — CMC 4.15-02
-MARK BITS 0-7 [-MARKC(0-7)] — CMC 4.11-04
12107 B02/RD1
+DELAY I CTR BIT 0
[-DIRB(0)] -DELAY I RESET 0
+DELAY I CTR BIT 1
[-DIRB(1)] -DELAY I RESET 1
+DELAY I CTR BIT 2
[-DIRB(2)] -DELAY I RESET 2
+DELAY I CTR BIT 3
[-DIRB(3)] -DELAY I RESET 3
-RESET DELAY I
TP24

NOTES:

1. BACKUP CHART ON CMC 4.10-05A.

△2 USE FOUR SECTIONS OF THE 12112 FOR WE FANOUT.

△3 CONNECT B TERMS TO AN EXTERNAL HI FOR ANY CORRESPONDING A TERM DELAY CTR BITS THAT ARE REQUIRED TO GENERATE THE RESET DELAY (I) SIGNAL. LEAVE THE REMAINING B TERMS OPEN. I.E. FOR THE 11 RANK DELAY (WHICH EQUALS 13 IN OCTAL) CONNECT B1.B2. AND B4 TO EXTERNAL HI'S. INPUTS REFER TO A1A INTERCONNECT BOARD. THESE 4 LINES MUST NOT BE TERMINATED.

TWO PIN PLUGS SHOULD BE CONNECTED AS FOLLOWS ON A1A INTERCONNECT BOARD TO CONNECT APPROPRIATE 'B' INPUTS TO EXTERNAL 'HI'S'.

A1A INT. BD. LOC.	DELAY CNTR BIT	STATUS
J5 19.20	0	PLUG
J5 17.18	1	OPEN
J5 15.16	2	PLUG
J5 13.14	3	PLUG

△4 LOCS. F08-F11 USE MINUS POLARITY WRT AND RD ADRS BITS
LOCS. F12 AND F13 USE PLUS POLARITY WRT AND RD ADRS BITS.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM - CMC 3.10.3.12
DELAY RANKS 1-16.

T3UH,A1J/3U00 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.10-05	17-129

12151 LOC: G5 NAME: DIRA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A12-7		T	D1	2	DELAY RD	3	T1	F4-2	
					ADRS BIT 0	4	F1	F12-3	3
E4-7	A12-5		D2	1	DELAY RD	6	T2	F4-1	
					ADRS BIT 1	5	F2	F12-4	3
E4-5		T	D3	20	DELAY RD	8	T3	F4-20	
					ADRS BIT 2	7	F3	F12-5	3
E4-1		T	D4	19	DELAY RD	12	T4	F4-19	
					ADRS BIT 3	11	F4	F12-6	3
E6-3	G5-17		D5	18	CM	14	T5	PIC-92	
					READ A	13	F5	TERM	
G5-18		T	D6	17	CM	16	T6	PIC-161	
					READ B	15	F6	TERM	
C2-7		T	C1	24					
D3-5		T	C2	23					
			MS	22					

12151 LOC: F4 NAME: DIWA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-3	F8-3		D1	2	DELAY WRT	3	T1	F8-2	4
					ADRS BIT 0	4	F1	F12-2	3
G5-6	F8-4		D2	1	DELAY WRT	6	T2	F8-1	4
					ADRS BIT 1	5	F2	F12-1	3
G5-8	F8-5		D3	20	DELAY WRT	8	T3	F8-24	4
					ADRS BIT 2	7	F3	F12-24	3
G5-12	F8-6		D4	19	DELAY WRT	12	T4	F8-23	4
					ADRS BIT 3	11	F4	F12-23	3
B14-19		T	D5	18	RESYNC	14	T5	F4-17	
					REFR (T1)	13	F5	TERM	
F4-14	G14-4		D6	17	RESYNC	16	T6	PIC-44	
					REFR(T2)	15	F6	TERM	
D6-11	E4-16		C1	24					
D4-23		T	C2	23					
			MS	22					

12145 LOC: F8 NAME: DB0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E9-3		T	D3	16	PW+EXCH	7	T3	PIC-88	
E12-12	D6-19		D2	15	BDS FAULT	8	T2	P2B-09	
E12-16	D4-19		D1	14	ILL FUNC	11	T1	P1B-40	
			D0	13		12	T0		
F4-3	F9-2		W3	2					
F4-6	F9-1		W2	1					
F4-8	F9-24		W1	24					
F4-12	F9-23		W0	23					
F4-2	F9-3		S3	3					
F4-1	F9-4		S2	4					
F4-20	F9-5		S1	5					
F4-19	F9-6		S0	6					
F6-3		T	C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: F9 NAME: DB1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E13-3		T	D3	16	MK BIT 0	7	T3	D12-24	
E13-6		T	D2	15	MK BIT 1	8	T2	D12-23	
E13-8		T	D1	14	MK BIT 2	11	T1	D12-20	
E13-12		T	D0	13	MK BIT 3	12	T0	D12-19	
F8-2	F10-2		W3	2					
F8-1	F10-1		W2	1					
F8-24	F10-24		W1	24					
F8-23	F10-23		W0	23					
F8-3	F10-3		S3	3					
F8-4	F10-4		S2	4					
F8-5	F10-5		S1	5					
F8-6	F10-6		S0	6					
F6-4		T	C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: F10 NAME: DB2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E13-14		T	D3	16	MK BIT 4	7	T3	D13-24	
E13-16		T	D2	15	MK BIT 5	8	T2	D13-23	
E12-3		T	D1	14	MK BIT 6	11	T1	D13-20	
E12-6		T	D0	13	MK BIT 7	12	T0	D13-19	
F9-2	F11-2		W3	2					
F9-1	F11-1		W2	1					
F9-24	F11-24		W1	24					
F9-23	F11-23		W0	23					
F9-3	F11-3		S3	3					
F9-4	F11-4		S2	4					
F9-5	F11-5		S1	5					
F9-6	F11-6		S0	6					
F6-15		T	C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: F11 NAME: DB3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E11-3		T	D3	16	PE BYTE 0	7	T3	PIC-137	
E11-6		T	D2	15	PE BYTE 1	8	T2	PIA-30	
E11-8		T	D1	14	PE BYTE 2	11	T1	PIA-32	
E11-12		T	D0	13	PE BYTE 3	12	T0	PIA-34	
F10-2		T	W3	2					
F10-1		T	W2	1					
F10-24		T	W1	24					
F10-23		T	W0	23					
F10-3		T	S3	3					
F10-4		T	S2	4					
F10-5		T	S1	5					
F10-6		T	S0	6					
F6-5		T	C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: F12 NAME: DB4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E11-14		T	D3	16	PE BYTE 4	7	T3	PIA-35	
E11-16		T	D2	15	PE BYTE 5	8	T2	PIA-36	
E8-3		T	D1	14	PE BYTE 6	11	T1	PIA-37	
E8-16		T	D0	13	PE BYTE 7	12	T0	PIA-40	
F4-4	F13-2		W3	2					
F4-5	F13-1		W2	1					
F4-7	F13-24		W1	24					
F4-11	F13-23		W0	23					
G5-4	F13-3		S3	3					
G5-5	F13-4		S2	4					
G5-7	F13-5		S1	5					
G5-11	F13-6		S0	6					
F6-13		T	C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: F13 NAME: DB5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E10-3		T	D3	16	FUNC CD 0	7	T3	P2B-03	
E10-6		T	D2	15	FUNC CD 1	8	T2	P2B-04	
E10-8		T	D1	14	FUNC CD 2	11	T1	P2B-06	
E10-12		T	D0	13	FUNC CD 3	12	T0	P2B-07	
F12-2	F14-2		W3	2					
F12-1	F14-1		W2	1					
F12-24	F14-24		W1	24					
F12-23	F14-23		W0	23					
F12-3	F14-3		S3	3					
F12-4	F14-4		S2	4					
F12-5	F14-5		S1	5					
F12-6	F14-6		S0	6					
F6-14		T	C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: F14 NAME: DB6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E12-8		T	D3	16	MK PAR	7	T3	P2B-22	
E10-14		T	D2	15	FUNC CD PAR	8	T2	P2B-08	
E8-8		T	D1	14	RSL	11	T1	PIC-182	
E8-12		T	D0	13	RCL	12	T0	PIC-181	
F13-2		T	W3	2					
F13-1		T	W2	1					
F13-24		T	W1	24					
F13-23		T	W0	23					
F13-3	B2-2		S3	3					
F13-4	B2-1		S2	4					
F13-5	B2-22		S1	5					
F13-6	B2-19		S0	6					
F6-6		T	C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12151 LOC: D4 NAME: DRA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F5-3		T	D1	2	DPE B7	3	T1	D1-18	
					(T3)	4	F1	TERM	
F5-6		T	D2	1	TPE	6	T2	D1-17	
					(T3)	5	F2	TERM	
C7-11		T	D3	20	FORCE RD	8	T3	B12-14	
					PE(T4)	7	F3	TERM	
F8-14	PIC-55		D4	19	ILL	12	T4	C7-23	
					FUNC(T3)	11	F4	TERM	
D6-19		T	D5	18	BDS	14	T5	C7-22	
					FAULT(T3)	13	F5	TERM	
D6-20		T	D6	17	ADRS/FUNC/	16	T6	C7-24	
					MK PE(T3)	15	F6	TERM	
D7-15		T	C1	24					
F7-17	F4-23		C2	23					
			MS	22					

12112 LOC: F06 NAME: WEF

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E7-16	F6-23		A1	24	WRITE ENABLE	1	T1	TERM	
						2	T2	TERM	
						3	F1	F8-20	
						4	F2	F9-20	
F6-24	F6-20		A2	23	WRITE ENABLE	8	T3	TERM	
						7	T4	TERM	
						6	F3	F14-20	
						5	F4	F11-20	
F6-23	F6-19		A3	20	WRITE ENABLE	11	T5	TERM	
						12	T6	TERM	
						13	F5	F12-20	
						14	F6	F13-20	
F6-20		T	A4	19	WRITE ENABLE	18	T7	TERM	
						17	T8	TERM	
						16	F7	B12-20	
						15	F8	F10-20	
E7-3		T	CX	22					

12112 LOC: D12 NAME: MK0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F9-7		T	A1	24	MARK BIT 0	1	T1	P2B-13	
						2	T2	PIC-165	
						3	F1	TERM	
						4	F2	TERM	
F9-8		T	A2	23	MARK BIT 1	8	T3	P2B-14	
						7	T4	PIC-153	
						6	F3	TERM	
						5	F4	TERM	
F9-11		T	A3	20	MARK BIT 2	11	T5	P2B-15	
						12	T6	PIC-150	
						13	F5	TERM	
						14	F6	TERM	
F9-12		T	A4	19	MARK BIT 3	18	T7	P2B-17	
						17	T8	PIC-173	
						16	F7	TERM	
						15	F8	TERM	
			CX	22					

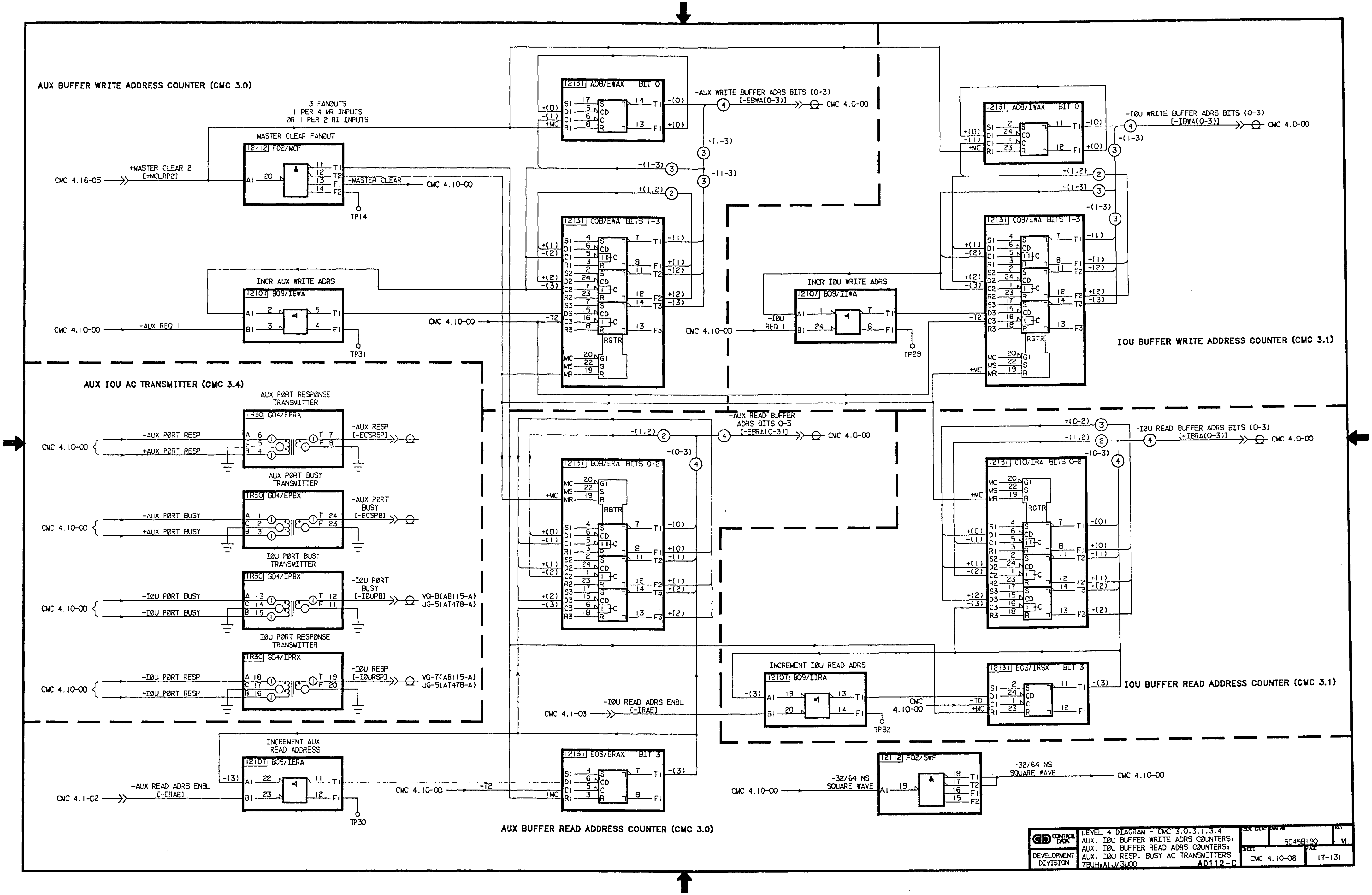
12112 LOC: D13 NAME: MK1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F10-7		T	A1	24	MARK BIT 4	1	T1	P2B-18	
						2	T2	PIC-169	
						3	F1	TERM	
						4	F2	TERM	
F10-8		T	A2	23	MARK BIT 5	8	T3	P2B-19	
						7	T4	PIC-170	
						6	F3	TERM	
						5	F4	TERM	
F10-11		T	A3	20	MARK BIT 6	11	T5	P2B-20	
						12	T6	PIC-166	
						13	F5	TERM	
						14	F6	TERM	
F10-12		T	A4	19	MARK BIT 7	18	T7	P2B-21	
						17	T8	PIC-174	
						16	F7	TERM	
						15	F8	TERM	
			CX	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.10-05
7BUH; A1J/3U00 AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.10-05A
17-130



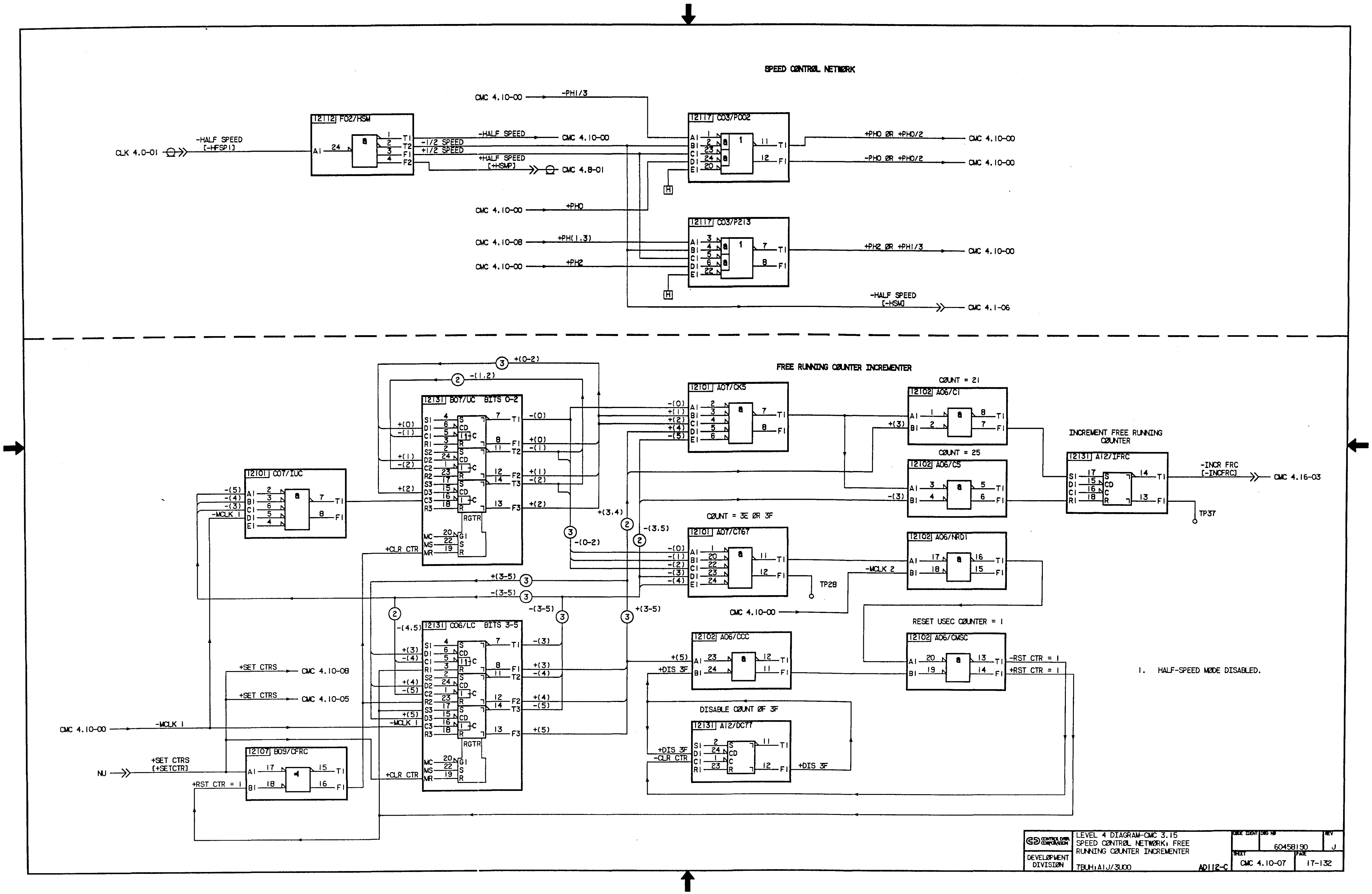
CONTROL DATA

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM - CMC 3.0,3.1,3.4
AUX, IOU BUFFER WRITE ADRS COUNTERS;
AUX, IOU BUFFER READ ADRS COUNTERS;
AUX, IOU RESP, BUSY AC TRANSMITTERS
TBUH,A1J/3U00 AD112-C

CODE IDENT	DWG NO	REV
	60458190	M

SHEET	PAGE
CMC 4.10-06	17-131

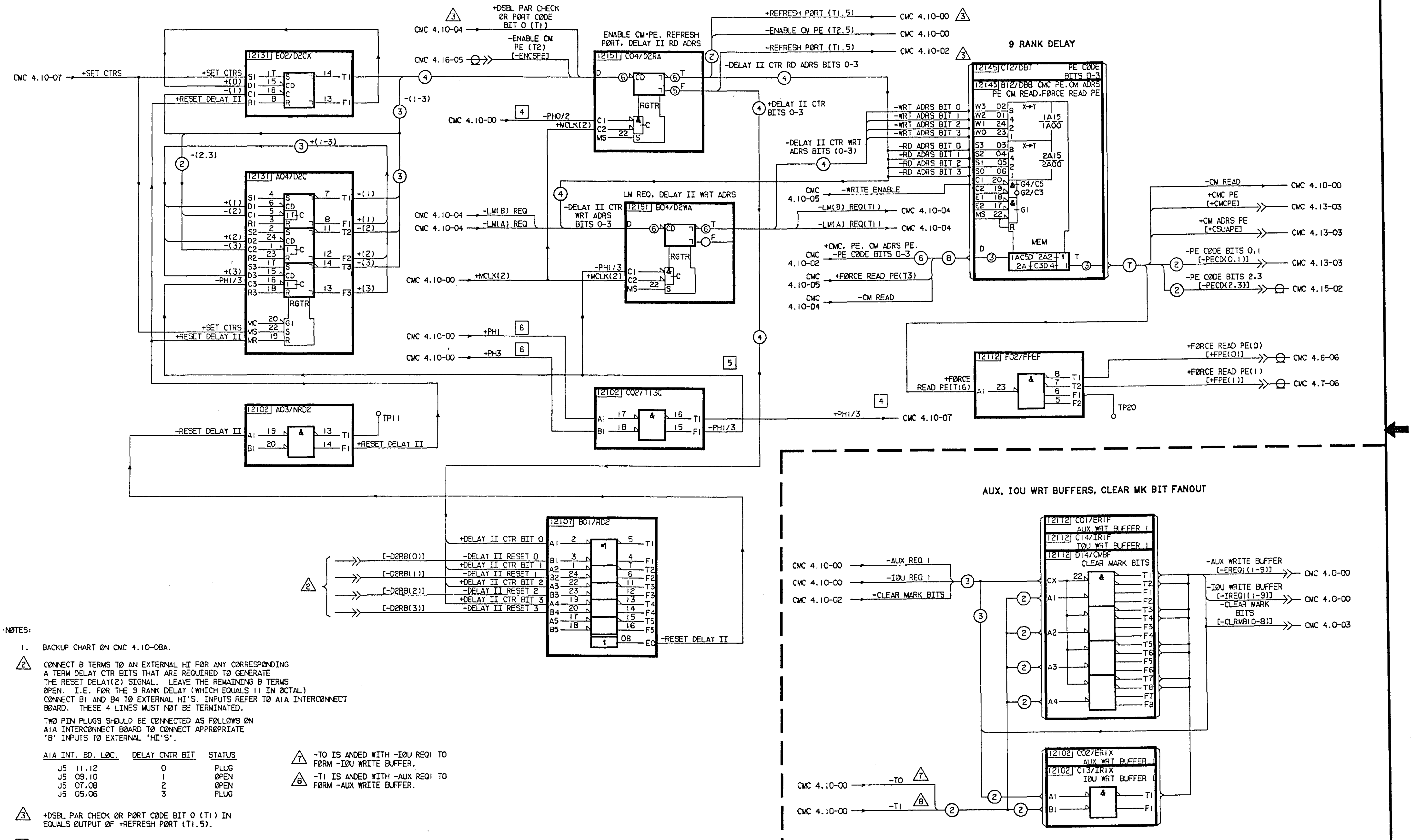


1. HALF-SPEED MODE DISABLED.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.15
SPEED CONTROL NETWORK; FREE
RUNNING COUNTER INCREMENTER
7BUH;A1J/3U00
AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.10-07
PAGE 17-132


9 RANK DELAY
AUX, IOU WRT BUFFERS, CLEAR MK BIT FANOUT
CMC 4.10-07 +SET CTRS
12131 E02/D2CX
+SET CTRS
+(0)
-(1)
+RESET DELAY II
-(1-3)
12131 A04/D2C
-(2,3)
+(1-3)
+(1) -(2) +(2) -(3) +(3) -PH1/3
RGTR
+SET CTRS
+RESET DELAY II
12102 A03/NRD2
-RESET DELAY II
+RESET DELAY II
TP11
+DSBL PAR CHECK OR PORT CODE BIT 0 (T1)
CMC 4.10-04
-ENABLE CM PE (T2) [-ENCSPE]
CMC 4.16-05
CMC 4.10-00 -PH0/2 +MCLK(2)
ENABLE CM·PE, REFRESH PORT, DELAY II RD ADRS
12151 C04/D2RA
LM REQ, DELAY II WRT ADRS
12151 B04/D2WA
-DELAY II CTR WRT ADRS BITS 0-3
CMC 4.10-04 -LM(B) REQ
CMC 4.10-04 -LM(A) REQ
CMC 4.10-00 +MCLK(2)
-PH1/3
CMC 4.10-00 +PH1
CMC 4.10-00 +PH3
12102 C02/T13C
-PH1/3
+PH1/3 CMC 4.10-07
+REFRESH PORT (T1.5) CMC 4.10-00
-ENABLE CM PE (T2.5) CMC 4.10-00
-REFRESH PORT (T1.5) CMC 4.10-02
-DELAY II CTR RD ADRS BITS 0-3
+DELAY II CTR BITS 0-3
-DELAY II CTR WRT ADRS BITS (0-3)
-WRT ADRS BIT 0
-WRT ADRS BIT 1
-WRT ADRS BIT 2
-WRT ADRS BIT 3
-RD ADRS BIT 0
-RD ADRS BIT 1
-RD ADRS BIT 2
-RD ADRS BIT 3
CMC 4.10-05 -WRITE ENABLE
-LM(B) REQ(T1) CMC 4.10-04
-LM(A) REQ(T1) CMC 4.10-04
CMC 4.10-02 +CMC, PE, CM ADRS PE, -PE CODE BITS 0-3
CMC 4.10-05 +FORCE READ PE(T3)
CMC 4.10-04 -CM READ
12145 C12/DB7 PE CODE BITS 0-3
12145 B12/DB8 CMC PE,CM ADRS PE CM READ,FORCE READ PE
MEM
-CM READ CMC 4.10-00
+CMC PE [+CMCPE] CMC 4.13-03
+CM ADRS PE [+CSUAPE] CMC 4.13-03
-PE CODE BITS 0,1 [-PECD(0,1)] CMC 4.13-03
-PE CODE BITS 2,3 [-PECD(2,3)] CMC 4.15-02
12112 F02/FPEF
+FORCE READ PE(T16)
+FORCE READ PE(0) [+FPE(0)] CMC 4.6-06
+FORCE READ PE(1) [+FPE(1)] CMC 4.7-06
TP20
12107 B01/RD2
+DELAY II CTR BIT 0
-DELAY II RESET 0
+DELAY II CTR BIT 1
-DELAY II RESET 1
+DELAY II CTR BIT 2
-DELAY II RESET 2
+DELAY II CTR BIT 3
-DELAY II RESET 3
[-D2RB(0)]
[-D2RB(1)]
[-D2RB(2)]
[-D2RB(3)]
-RESET DELAY II
12112 C01/ERIF AUX WRT BUFFER 1
12112 C14/IRIF IOU WRT BUFFER 1
12112 D14/CMBF CLEAR MARK BITS
CMC 4.10-00 -AUX REQ 1
CMC 4.10-00 -IOU REQ 1
CMC 4.10-02 -CLEAR MARK BITS
-AUX WRITE BUFFER [-EREQ1(1-9)] CMC 4.0-00
-IOU WRITE BUFFER [-IREQ1(1-9)] CMC 4.0-00
-CLEAR MARK BITS [-CLRMB(0-8)] CMC 4.0-03
12102 C02/ERIX AUX WRT BUFFER
12102 C13/IRIX IOU WRT BUFFER 1
CMC 4.10-00 -T0
CMC 4.10-00 -T1

NOTES:

1. BACKUP CHART ON CMC 4.10-08A.

⚠2 CONNECT B TERMS TO AN EXTERNAL HI FOR ANY CORRESPONDING A TERM DELAY CTR BITS THAT ARE REQUIRED TO GENERATE THE RESET DELAY(2) SIGNAL. LEAVE THE REMAINING B TERMS OPEN. I.E. FOR THE 9 RANK DELAY (WHICH EQUALS 11 IN OCTAL) CONNECT B1 AND B4 TO EXTERNAL HI'S. INPUTS REFER TO A1A INTERCONNECT BOARD. THESE 4 LINES MUST NOT BE TERMINATED.

TWO PIN PLUGS SHOULD BE CONNECTED AS FOLLOWS ON A1A INTERCONNECT BOARD TO CONNECT APPROPRIATE 'B' INPUTS TO EXTERNAL 'HI'S'.

A1A INT. BD. LOC.	DELAY CNTR BIT	STATUS
J5 11,12	0	PLUG
J5 09,10	1	OPEN
J5 07,08	2	OPEN
J5 05,06	3	PLUG

⚠3 +DSBL PAR CHECK OR PORT CODE BIT 0 (T1) IN EQUALS OUTPUT OF +REFRESH PORT (T1.5).

4 LENGTH 3 TO 4 INCHES.

5 LENGTH 3 TO T INCHES.

6 LENGTH 1 TO 2 INCHES.

⚠7 -TO IS ANDED WITH -IOU REQ1 TO FORM -IOU WRITE BUFFER.

⚠8 -T1 IS ANDED WITH -AUX REQ1 TO FORM -AUX WRITE BUFFER.

CONTROL DATA	LEVEL 4 DIAGRAM-CMC 3.10 DELAY RANKS 4-16	CODE IDENT	DWG NO 60458190
DEVELOPMENT DIVISION	7BUH;A1J/3U00 AD112-C	SHEET CMC 4.10-08	PAGE 17-133

REV M

12151 LOC: C04 NAME: D2RA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E2-14		T	D1	2	DELAY RD ADRS BIT 0	3	T1	B4-2	3
						4	F1	B1-2	1
A4-7	E2-16		D2	1	DELAY RD ADRS BIT 1	6	T2	B4-1	3
						5	F2	B1-1	1
A4-5		T	D3	20	DELAY RD ADRS BIT 2	8	T3	B4-20	3
						7	F3	B1-22	1
A4-1		T	D4	19	DELAY RD ADRS BIT 3	12	T4	B4-19	3
						11	F4	B1-19	1
A3-12	G08-19		D5	18	$\overline{\text{REFRESH}}$ $\overline{\text{PORT}}$ (T1.5)	14	T5	D2-18	
						13	F5	G8-23	
PIC-011		T	D6	17	ENABLE CM P.E.(T2.5)	16	T6	D2-17	
						15	F6	TERM	
D3-19		T	C1	24					
B4-23		T	C2	23					
			MS	22					

12151 LOC: B04 NAME: D2WA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C4-3	B12-3		D1	2	DELAY WRT ADRS BIT 0	3	T1	B12-2	2
						4	F1	TERM	
C4-6	B12-4		D2	1	DELAY WRT ADRS BIT 1	6	T2	B12-1	2
						5	F2	TERM	
C4-8	B12-5		D3	20	DELAY WRT ADRS BIT 2	8	T3	B12-24	2
						7	F3	TERM	
C4-12	B12-6		D4	19	DELAY WRT ADRS BIT 3	12	T4	B12-23	2
						11	F4	TERM	
A1-8	G13-15		D5	18	P3A REQ	14	T5	B3-18	1
						13	F5	TERM	
A1-13	G13-18		D6	17	P3B REQ	16	T6	B3-16	1
						15	F6	TERM	
A4-16		T	C1	24					
D3-16	C4-23		C2	23					
			MS	22					

12145 LOC: C12 NAME: DB7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B6-8		T	D3	16	PECD BIT 0	7	T3	P2B-24	
B6-12		T	D2	15	PECD BIT 1	8	T2	P2B-26	
B6-14		T	D1	14	PECD BIT 2	11	T1	PIC-149	
B6-16		T	D0	13	PECD BIT 3	12	T0	PIC-146	
B12-2		T	W3	2					
B12-1		T	W2	1					
B12-24		T	W1	24					
B12-23		T	W0	23					
B12-3		T	S3	3					
B12-4		T	S2	4					
B12-5		T	S1	5					
B12-6		T	S0	6					
F06-16	B12-20		C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: B12 NAME: DB8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B6-3		T	D3	16	CMC PE	7	T3	P2B-30	
B6-6		T	D2	15	CSU ADRS PE	8	T2	P2B-23	
D4-8		T	D1	14	FORCE RD PE	11	T1	F2-23	
E9-8		T	D0	13	CM READ	12	T0	E6-2	
B4-3	C12-2		W3	2					
B4-6	C12-1		W2	1					
B4-8	C12-24		W1	24					
B4-12	C12-23		W0	23					
B4-2	C12-3		S3	3					
B4-1	C12-4		S2	4					
B4-20	C12-5		S1	5					
B4-19	C12-6		S0	6					
C12-20		T	C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12112 LOC: C01 NAME: ERIF

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C1-23		T	A1	24	AUX WRT BUFFER	1	T1	PIA-22	
						2	T2	PIA-21	
						3	F1	TERM	
						4	F2	TERM	
C1-20	C1-24		A2	23	AUX WRT BUFFER	8	T3	PIA-19	
						7	T4	PIA-20	
						6	F3	TERM	
						5	F4	TERM	
C1-19	C1-23		A3	20	AUX WRT BUFFER	11	T5	PIA-17	
						12	T6	PIA-16	
						13	F5	TERM	
						14	F6	TERM	
C2-20	C1-20		A4	19	AUX WRT BUFFER	18	T7	PIA-26	
						17	T8	PIA-24	
						16	F7	TERM	
						15	F8	TERM	
G10-04	C02-19		CX	22					

12112 LOC: C14 NAME: IRIF

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-02	C14-23		A1	24	IOU WRT BUFFER	1	T1	PIB-28	
						2	T2	PIB-27	
						3	F1	TERM	
						4	F2	TERM	
C14-24	C14-20		A2	23	IOU WRT BUFFER	8	T3	PIB-22	
						7	T4	PIB-23	
						6	F3	TERM	
						5	F4	TERM	
C14-23	C14-19		A3	20	IOU WRT BUFFER	11	T5	PIB-20	
						12	T6	PIB-21	
						13	F5	TERM	
						14	F6	TERM	
C14-20		T	A4	19	IOU WRT BUFFER	18	T7	PIB-26	
						17	T8	PIB-24	
						16	F7	TERM	
						15	F8	TERM	
C13-01		T	CX	22					

12112 LOC: D14 NAME: CMBF

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	24	CLEAR MARK BITS	1	T1	PIB-37	
						2	T2	PIB-35	
						3	F1	TERM	
						4	F2	TERM	
			A2	23	CLEAR MARK BITS	8	T3	PIB-33	
						7	T4	PIB-34	
						6	F3	TERM	
						5	F4	TERM	
			A3	20	CLEAR MARK BITS	11	T5	PIB-29	
						12	T6	PIB-30	
						13	F5	TERM	
						14	F6	TERM	
			A4	19	CLEAR MARK BITS	18	T7	PIB-32	
						17	T8	PIB-31	
						16	F7	TERM	
						15	F8	TERM	
D6-16	PIB-38		CX	22					

12102 LOC: C02 NAME: ERIX

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C01-22		T	A1	19	AUX WRT BUFFER	13	T1	PIA-15	
E7-11	C1-19		B1	20		14	F1	TERM	

12102 LOC: C13 NAME: IRIX

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G11-11	C14-22		A1	01	IOU WRT BUFFER	08	T1	PIB-19	
E07-17	C14-24		B1	02		07	F1	TERM	

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.10-08
7BUH; A1J/3U00 AD112-C

CODE IDENT 34010 D
DWG NO 60458190
REV M
SHEET CMC 4.10-08A 17-134

LEFT ZIF [2]					
BIT NAME	I/O	SHEET	TYPE	VIRTUAL PIN	REAL PIN
MCLRP2	I	06	Z	U03	P1A-06
SAPE1 (0)		01	D	U0D	P2A-09
SAPE1P (0)				U11	11
(1)				U0E	14
(1)				U12	16
(2)				U0F	15
(2)				U13	17
SAPE1 (3)				0	20
SAPE1P (3)				4	22
SAPE2 (0)				5	19
SAPE2P (0)				9	21
(1)				6	24
(1)				A	26
(2)				7	25
(2)				B	27
SAPE2 (3)				8	29
SAPE2P (3)		01	D	U1C	P2A-31
ARE		04	Z	U30	P1A-01
EREQE		04		3	02
ERAE		06		4	11
EPTBSY		00		5	P1A-14
RFRQE		03		B	P2A-10
FUN (0)				C	P1A-05
(1)				D	07
(2)				E	09
(3)				U3F	10
FUN (8)		03	Z	U40	P1A-12
LMABT		04	D	1	P2A-37
LMABTP		04	D	2	P2A-39
DIRB (0)		05	Z	8	P1A-39
(1)				9	P2A-01
(2)				A	02
DIRB (3)		05		B	04
D2RB (0)		08		C	05
(1)				D	06
(2)				E	07
D2RB (3)	I	08	Z	U4F	P2A-12
DPE (1)	O	05	Z	U8C	P1A-30
(2)				D	32
(3)				E	34
(4)				U8F	35
(5)				U90	36
(6)				1	37
DPE (7)		05		U92	40
EREQI (1)		08		UAA	15
(2)				B	16
(3)				C	17
(4)				D	19
(5)				E	20
(6)				UAF	21
(7)				UB0	22
(8)				1	24
(9)		08		2	26
EREQI		00		3	25
EREQIP		00	Z	UB4	P1A-27
CSUWT		04	D	UF2	P2A-34
CSUWTP				3	36
PASS2				4	30
PASS2P		04	D	5	P2A-32
RESREF		03	Z	UF7	P1A-31
HSM	O	07		UB3	P1A-04
SETCTR	I	07	Z	U52	P2A-40
					P1A-29 [1]

ZIF GROUND PINS			
P1A-03	P1A-23	P2A-03	P2A-23
P1A-08	P1A-28	P2A-08	P2A-28
P1A-13	P1A-33	P2A-13	P2A-33
P1A-18	P1A-38	P2A-18	P2A-38

COAX [2]					
BIT NAME	I/O	SHEET	TYPE	VIRTUAL PIN	REAL PIN
NCLKN (400)	I	00	C	U00	P1C-80
NCLKN (401)				1	40
CLKPM (69)		00		U02	63
DB7PE		01		U25	60
HFSPD		07		U04	12
CBSY3		04		6	178
CBSY4		04		U07	145
WDPERR (0)		02		U1D	71
(1)				E	67
(2)				U1F	72
(3)				U20	75
(4)				1	76
(5)				2	101
(6)				3	102
WDPERR (7)		02		4	97
TAGPE		01		U2F	59
EREQ		00		U32	162
IREQ				U36	157
IEXRIN		00		U45	154
IDB7PE		05		U46	79
PTM (20)		01		U50	39
PTM (19)		04		U51	177
ENISFN	I	04		U3A	142
HSMP	O	07		U84	08
MARKC (0)		05		U93	165
(1)				4	153
(2)				5	150
(3)				6	173
(4)				7	169
(5)				8	170
(6)				9	166
MARKC (7)		05		U9A	174
PTCDP (0)		03		UA7	134
(1)		04		8	185
PTCDP (2)		04		UA9	186
EBWA (0)		06		UB5	84
(1)				6	110
(2)				7	91
EBWA (3)				8	105
EBRA (0)				9	83
(1)				A	87
(2)				B	106
EBRA (3)		06		UBC	109
IREQTI		04		UC7	118
IBWA (0)		06		B	68
(1)				C	114
(2)				D	117
IBWA (3)				E	121
IBRA (0)				UCF	122
(1)				UD0	125
(2)				1	130
IBRA (3)		06		2	124
BLK		05		3	92
FPE (0)		08		4	04
FPE (1)		08		5	03
PWEX		05		6	88
BFOPE		05		8	64
FNCDPE		04		E	126
READ		03		UDF	138
WRITE		03		UE0	133
RSL		05		1	182
RCL		05		2	181
RFRC		03		3	113
INTRPT		03		5	141
ILFNC		04		6	55
RDRSP		04		UE8	98
EXRINT		00		UF6	16
IOUPB		06		UCA	43
ECSPB		06		UBD	52
RSRFT2		05		UF8	44
DPE (0)		05		UBB	137
PECD (2)		08		9	149
PECD (3)	O	08		UBA	146
ERESP	I	00		U53	36
IRESP	I	00		U54	35
ECSRSP	O	06		UF9	48
IOURSP		06		A	56
DATPE	O	01		UFB	51
ENCMPE	I	01		U55	007
ENCSPE	I	08		U56	011
REQIP	O	04		UFD	019
CSRB	O	05	C	UFC	P1C-161

RIGHT ZIF [2]					
BIT NAME	I/O	SHEET	TYPE	VIRTUAL PIN	REAL PIN
DPC	I	04	Z	V05	P1B-15
ADRS01		04		8	P2B-38
CAPE (0)		03		9	31
(1)				A	32
(2)				B	33
CAPE (3)		03		V0C	P2B-34
MARK (0)		02		V26	P1B-03
(1)				7	04
(2)				8	06
(3)				9	07
(4)				A	08
(5)				B	09
(6)				C	10
(7)				D	11
MARK (8)		02		V2E	12
BRE		04		V31	01
IREQE		04		7	02
IRAE		06		8	13
IPTBSY		00	Z	V39	P1B-14
LBABT		04	D	V43	P2B-37
LBABTP		04	D	4	39
CBDFLT	I	03	Z	V47	29
CMCPE	O	08		V85	30
CSUAPE				6	23
PECD (0)				7	24
PECD (1)	O	08	Z	V88	P2B-26
MARKM (0)	O	05	Z	U9B	P2B-13
(1)				C	14
(2)				D	15
(3)				E	17
(4)				U9F	18
(5)				UA0	19
(6)				1	20
(7)				2	21
MARKM (8)		05		3	22
PTCD (0)		03		4	10
(1)		04		5	11
PTCD (2)		04		UA6	P2B-12
IREQI (1)		08		UBE	P1B-19
(2)				UBF	20
(3)				UC0	21
(4)				1	22
(5)				2	23
(6)				3	24
(7)				4	26
(8)				5	27
(9)		08		6	28
IREQI (0)		00		8	17
IREQIP		00		UC9	P1B-18
MBDFLT		05		UD7	P2B-09
FNCD (0)				9	03
(1)				A	04
(2)				B	06
(3)				C	07
FNCD (8)		05		UDD	08
INCFRC		07		UE4	P2B-01
ILFNM		05		7	P1B-40
CLRMB (0)		08		9	29
(1)				A	30
(2)				B	31
(3)				C	32
(4)				D	33
(5)				E	34
(6)				UEF	35
(7)				UF0	37
CLRMB (8)	O	08	Z	UF1	P1B-38

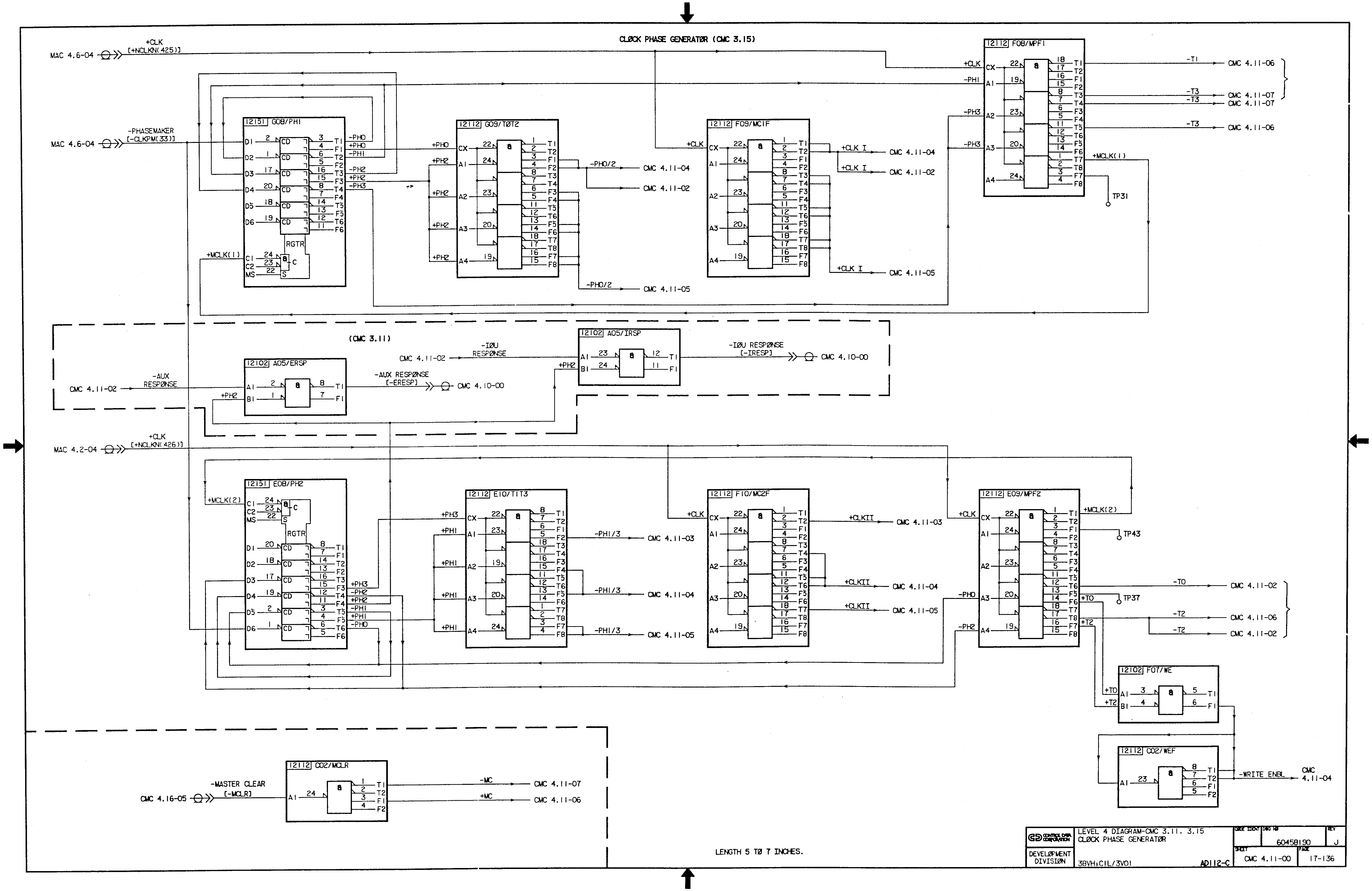
ZIF GROUND PINS			
P1B-05	P1B-25	P2B-05	P2B-25
P1B-16	P1B-36	P2B-16	P2B-36

NOTES:

[1] NU TIED TO AB231 ON INTERCONNECT BOARD.

[2] CONNECTOR TYPES
C = COAX
D = DIFFERENTIAL
Z = ZIF TO FOIL ON INTERCONNECT BOARD

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION
LEVEL 4 CONNECTOR CHART
SUPPLEMENTAL WIRING INFORMATION
7BUH:A1J/3U00
AD112-C
CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.10-CC
PAGE 17-135

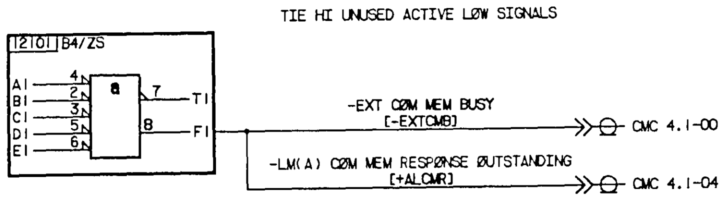


LENGTH 5 TO 7 INCHES.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION
LEVEL 4 DIAGRAM-CMC 3.11, 3.15
CLOCK PHASE GENERATOR
3BVH;C1L/3V01
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.11-00	17-136

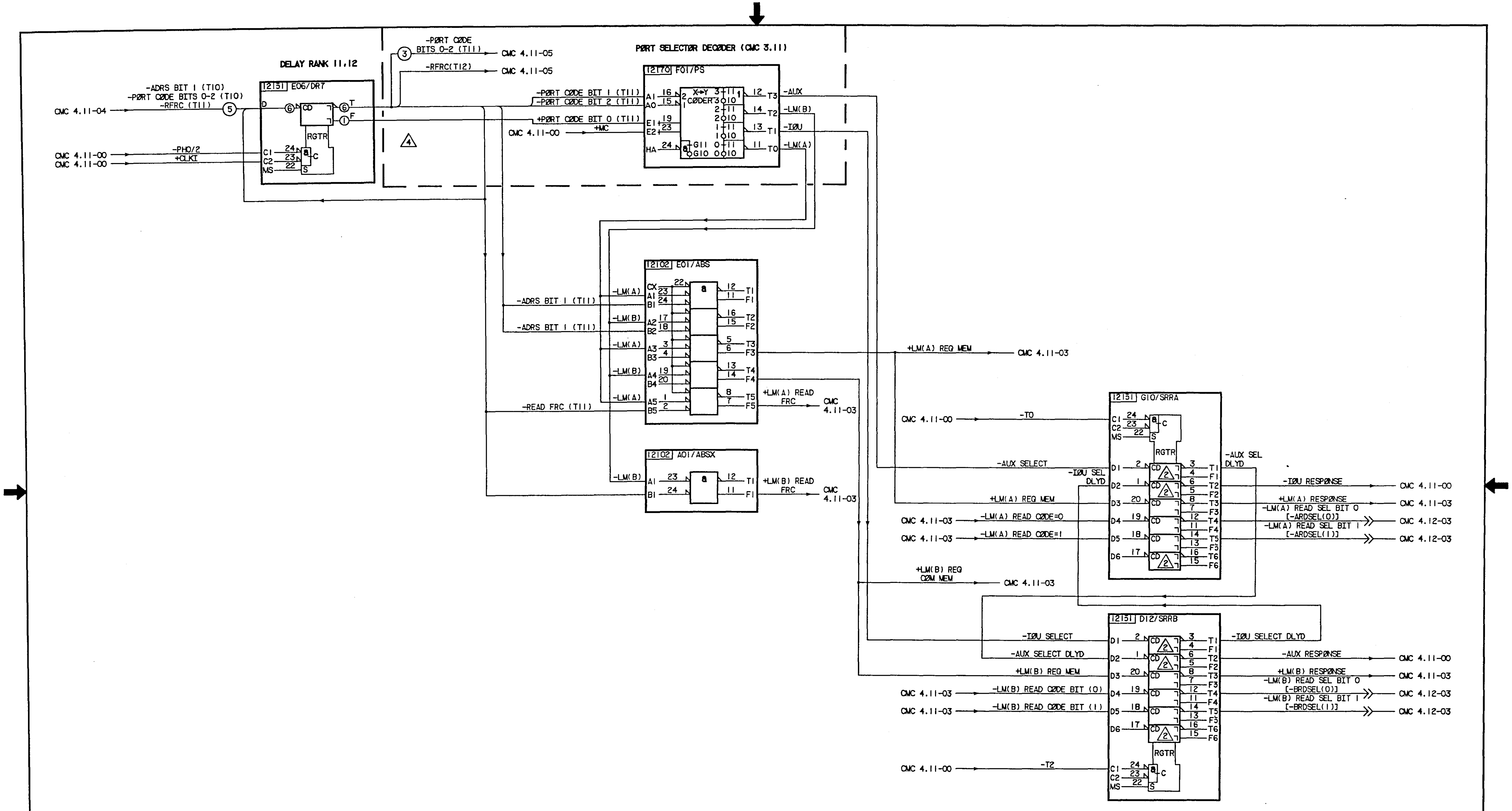


CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM - CMC 3.6
LM(A) CØMMØN MEMØRY RESPØNSE
CØNTRØL; 48 NANØSECØND DELAY
AND RESYNC NETWØRK.
3BVH;CIL/3V01
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.11-01	17-137



NØTES:

1. BACKUP CHARTS ARE ØN PAGE CMC 4.11-03A

2. HØLDING REGISTER.

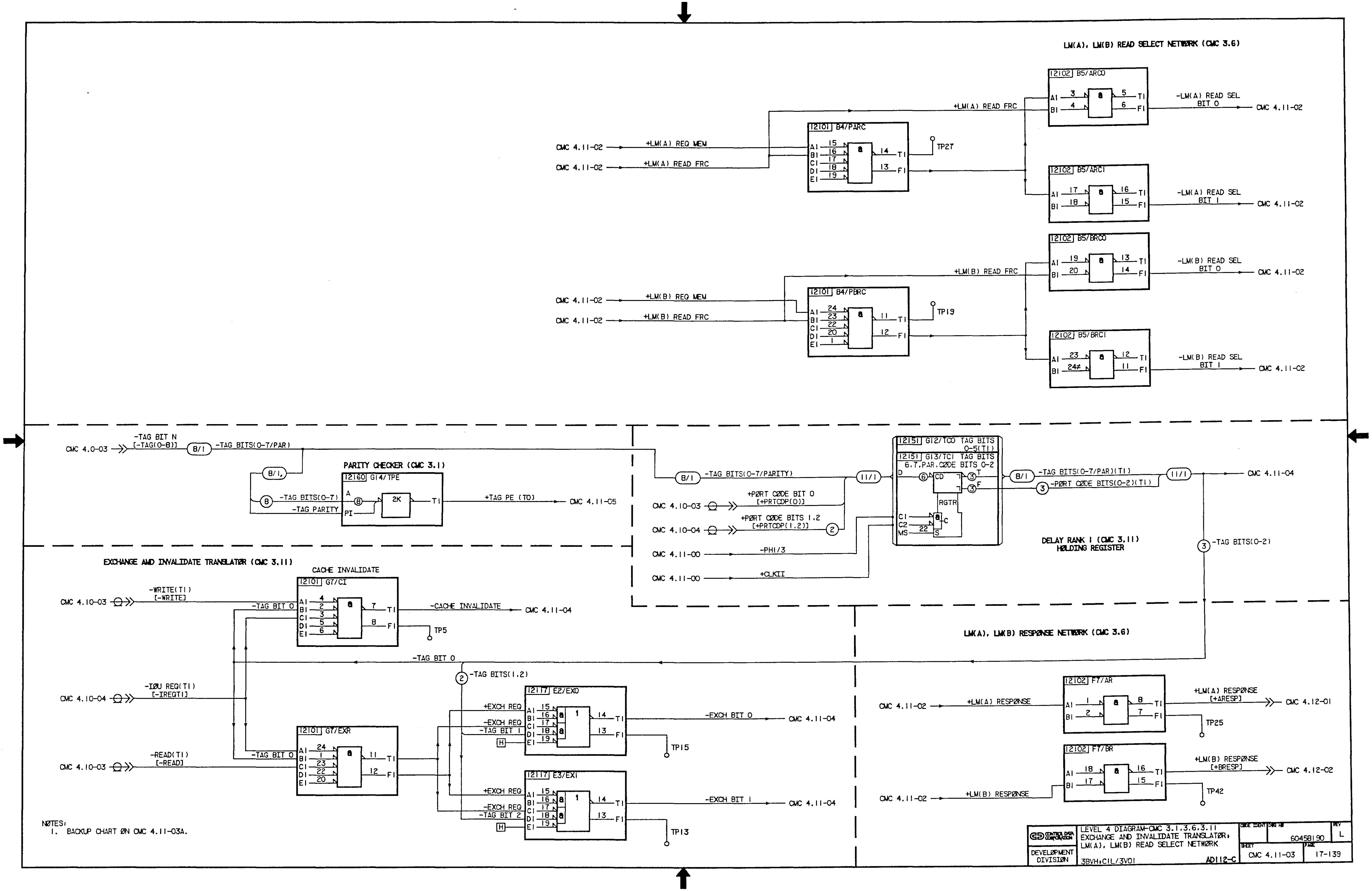
3. LM(A) IS FRØM LØCAL PRØCESSØR LM.
LM(B) IS FRØM REMØTE PRØCESSØR LM.

4. TØ E01-4/E01-20 MUSDT BE RE-INSTALLED.

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CMC 3.6.3.11
PØRT SELECTØR
LM(A), LM(B), READ SELECT
3BVH;CIL/3V01 AD112-C

DWG NO 60458190 REV L
SHEET CMC 4.11-02 PAGE 17-138



NØTES:
1. BACKUP CHART ØN CMC 4.11-03A.

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CMC 3.1.3.6.3.11
EXCHANGE AND INVALIDATE TRANSLATØR,
LM(A), LM(B) READ SELECT NETWØRK
3BVH,C1L/3V01
AD112-C

CODE IDENT	DWG NO	REV
	60458190	L

SHEET	PAGE
CMC 4.11-03	17-139

LOGIC ON SHEET CMC 4.11-02

12151 LOC: E6 NAME: DR7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A11-11		T	D1	2	ADRS	3	T1	E1-24	2
					BIT 01 (T13)	4	F1	TERM	
A10-8		T	D2	1	PORT CODE	6	T2	C7-2	1
					BIT 0 (T13)	5	F2	F1-19	
A10-11		T	D3	20	PORT CODE	8	T3	F1-16	2
					BIT 1 (T13)	7	F3	TERM	
A10-12		T	D4	19	PORT CODE	12	T4	F1-15	2
					BIT 2 (T13)	11	F4	TERM	1
A11-12		T	D5	18	RFRC	14	T5	E6-17	3
					(T13)	13	F5	TERM	
E6-14	E1-2		D6	17	RFRC	16	T6	D10-18	1
					(T14)	15	F6	TERM	
G9-4	E5-24		C1	24					
F9-1	E5-23		C2	23					
			MS	22					

12160 LOC: G14 NAME: TPE

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P2B-30	G12-2		A1	1	TAG BIT 0	7	T1	G06-17	1
P2B-27	G12-1		A2	2	TAG BIT 1				
P2B-26	G12-20		A3	3	TAG BIT 2				
P2B-25	G12-19		A4	4	TAG BIT 3				
P2B-24	G12-18		A5	5	TAG BIT 4				
P2B-22	G12-17		A6	22	TAG BIT 5				
P2B-21	G13-2		A7	23	TAG BIT 6				
P2B-20	G13-1		A8	24	TAG BIT 7				
P2B-19	G13-20		PI	6	TAG PARITY				

12151 LOC: G12 NAME: TCO

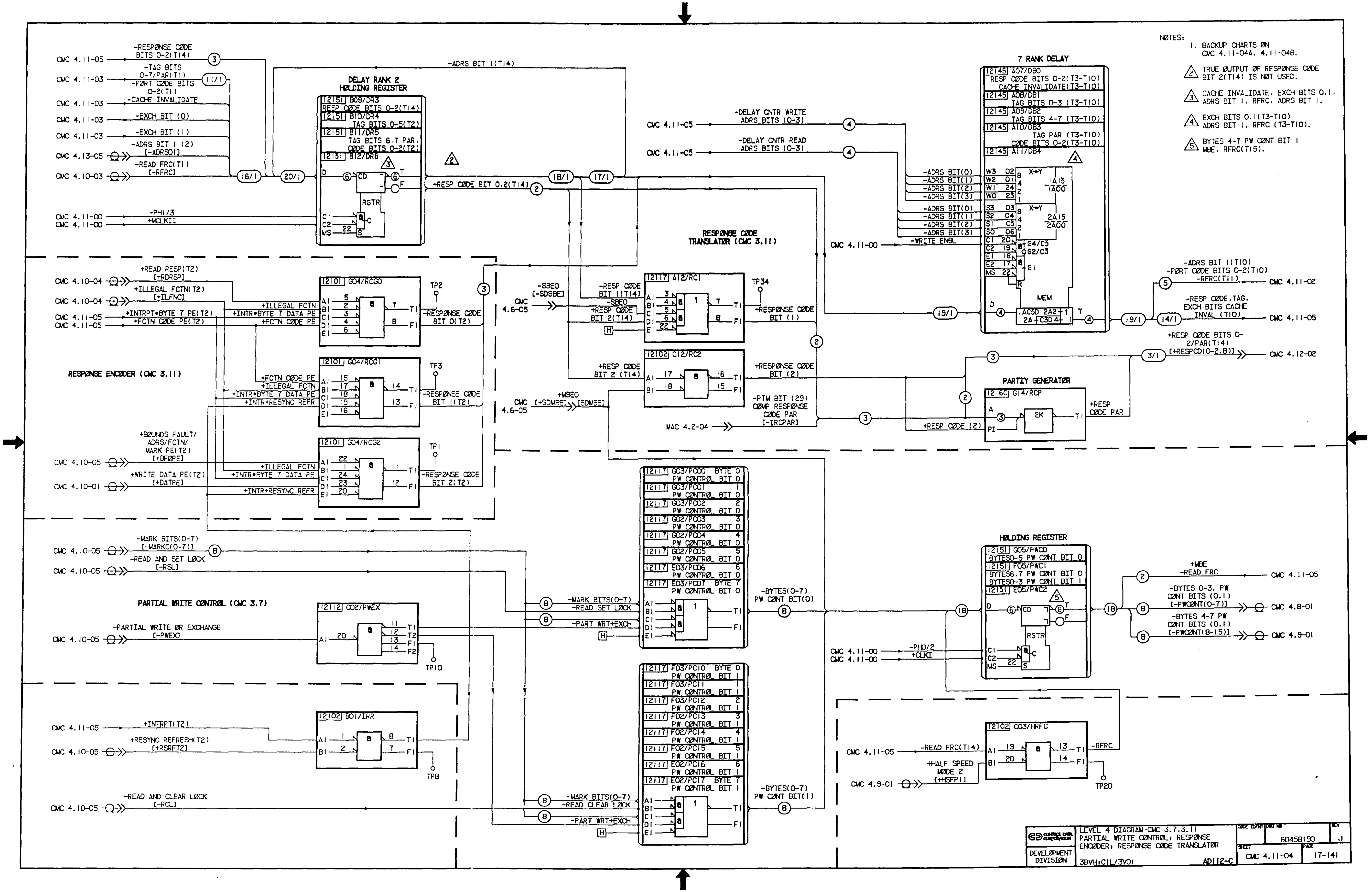
SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G14-1		T	D1	2	TAG	3	T1	G7-2	
					BIT 0 (T1)	4	F1	TERM	
G14-2		T	D2	1	TAG	6	T2	B10-1	
					BIT 1 (T1)	5	F2	TERM	
G14-3		T	D3	20	TAG	8	T3	B10-20	
					BIT 2 (T1)	7	F3	TERM	
G14-4		T	D4	19	TAG	12	T4	B10-19	1
					BIT 3 (T1)	11	F4	TERM	
G14-5		T	D5	18	TAG	14	T5	B10-18	1
					BIT 4 (T1)	13	F5	TERM	
G14-22		T	D6	17	TAG	16	T6	B10-17	1
					BIT 5 (T1)	15	F6	TERM	
E10-5	G13-24		C1	24					
G13-23		T	C2	23					
			MS	22					

12151 LOC: G13 NAME: TC1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G14-23		T	D1	2	TAG	3	T1	B11-2	1
					BIT 6 (T1)	4	F1	TERM	
G14-24		T	D2	1	TAG	6	T2	B11-1	1
					BIT 7 (T1)	5	F2	TERM	
G14-6		T	D3	20	TAG	8	T3	B11-20	1
					PARITY (T1)	7	F3	TERM	
P1C-174		T	D4	19	PORT CD	12	T4	TERM	
					BIT 0 (T1)	11	F4	B11-19	1
P1C-170		T	D5	18	PORT CD	14	T5	TERM	
					BIT 1 (T1)	13	F5	B11-18	1
P1C-169		T	D6	17	PORT CD	16	T6	TERM	
					BIT 2 (T1)	15	F6	B11-17	1
G12-24		T	C1	24					
F10-2	G12-23		C2	23					
			MS	22					

LOGIC ON SHEET CMC 4.11-03

CONTROL DATA CORPORATION ARDEN HILLS OPERATIONS	LEVEL 4 BACKUP CHART SUPPLEMENTAL WIRING INFORMATION CMC 4.11-02, 4.11-03 3BVH; C1L/3V01 AD112-C	CODE IDENT 34010	D	DWG NO 60458190	REV J
				SHEET CMC 4.11-03A	17-140


DELAY RANK 2 HOLDING REGISTER
7 RANK DELAY
RESPONSE CODE TRANSLATOR (CMC 3.11)
RESPONSE ENCODER (CMC 3.11)
PARTIAL WRITE CONTROL (CMC 3.7)
PARITY GENERATOR
HOLDING REGISTER
-RESPONSE CODE BITS 0-2(T14)
-TAG BITS 0-7/PAR(T1)
-PORT CODE BITS 0-2(T1)
-CACHE INVALIDATE
-EXCH BIT (0)
-EXCH BIT (1)
-ADRS BIT 1 (2) [-ADRS01]
-READ FRC(T1) [-RFRC]
-PH1/3
+MCLK11
-ADRS BIT 1(T14)
+RESP CODE BIT 0,2(T14)
-DELAY CNTR WRITE ADRS BITS (0-3)
-DELAY CNTR READ ADRS BITS (0-3)
-WRITE ENBL
MEM
-ADRS BIT 1(T10)
-PORT CODE BITS 0-2(T10)
-RFRC(T11)
-RESP CODE,TAG, EXCH BITS CACHE INVAL (T10)
+RESP CODE BITS 0-2/PAR(T14) [+RESPCD(0-2,8)]
+READ RESP(T2) [+RDRSP]
+ILLEGAL FCTN(T2) [+ILFNC]
+INTRPT•BYTE 7 PE(T2)
+FCTN CODE PE(T2)
-RESPONSE CODE BIT 0(T2)
-RESPONSE CODE BIT 1(T2)
-RESPONSE CODE BIT 2(T2)
+BOUNDS FAULT/ ADRS/FCTN/ MARK PE(T2) [+BFOPE]
+WRITE DATA PE(T2) [+DATPE]
-SBEO [-SDSBE]
+MBEO [+SDMBE] [SDMBE]
+RESPONSE CODE BIT (1)
+RESPONSE CODE BIT (2)
-PTM BIT (29) COMP RESPONSE CODE PAR [-IRCPAR]
+RESP CODE PAR
-MARK BITS(O-7) [-MARKC(0-7)]
-READ AND SET LOCK [-RSL]
-PARTIAL WRITE OR EXCHANGE [-PWEX]
-READ SET LOCK
-PART WRT+EXCH
-BYTES(0-7) PW CONT BIT(0)
-BYTES(0-7) PW CONT BIT(1)
-READ CLEAR LOCK
+INTRPT(T2)
+RESYNC REFRESH(T2) [+RSRFT2]
-READ AND CLEAR LOCK [-RCL]
+MBE -READ FRC
-BYTES 0-3, PW CONT BITS (0,1) [-PWCONT(0-7)]
-BYTES 4-7 PW CONT BITS (0,1) [-PWCONT(8-15)]
-PH0/2
+CLK1
-READ FRC(T14)
+HALF SPEED MODE 2 [+HSFP1]
-RFRC
TP1
TP2
TP3
TP8
TP10
TP20
TP34
CMC 4.11-05
CMC 4.11-03
CMC 4.13-05
CMC 4.10-03
CMC 4.11-00
CMC 4.10-04
CMC 4.10-05
CMC 4.10-01
CMC 4.6-05
MAC 4.2-04
CMC 4.11-02
CMC 4.12-02
CMC 4.8-01
CMC 4.9-01

NOTES:

1. BACKUP CHARTS ON CMC 4.11-04A, 4.11-04B.

2. TRUE OUTPUT OF RESPONSE CODE BIT 2(T14) IS NOT USED.

3. CACHE INVALIDATE, EXCH BITS 0,1, ADRS BIT 1, RFRC, ADRS BIT 1.

4. EXCH BITS 0,1(T3-T10) ADRS BIT 1, RFRC (T3-T10).

5. BYTES 4-7 PW CONT BIT 1 MBE, RFRC(T15).

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.7.3.11
PARTIAL WRITE CONTROL, RESPONSE ENCODER, RESPONSE CODE TRANSLATOR

3BVH:CIL/3V01 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.11-04	17-141

12151 LOC: B09 NAME: DR3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			D1				T1		
							F1		
			D2				T2		
							F2		
			D3				T3		
							F3		
B6-3		T	D4	19	RESP CODE	12	T4	TERM	2
					BIT 0 (T16)	11	F4	G14-13	
B6-6		T	D5	18	RESP CODE	14	T5	A12-3	1
					BIT 1 (T16)	13	F5	TERM	
B6-8		T	D6	17	RESP CODE	16	T6	TERM	
					BIT 2 (T16)	15	F6	A12-6	2
B11-24		T	C1	24					
F10-12		T	C2	23					
			MS	22					

12151 LOC: B10 NAME: DR4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G07-2		T	D1	2	TAG	3	T1	A8-16	1
					BIT 0 (T2)	4	F1	TERM	
G12-6	E2-18		D2	1	TAG	6	T2	A8-15	1
					BIT 1 (T2)	5	F2	TERM	
G12-8	E3-18		D3	20	TAG	8	T3	A8-14	1
					BIT 2 (T2)	7	F3	TERM	
G12-12		T	D4	19	TAG	12	T4	A8-13	1
					BIT 3 (T2)	11	F4	TERM	
G12-14		T	D5	18	TAG	14	T5	A9-16	1
					BIT 4 (T2)	13	F5	TERM	
G12-16		T	D6	17	TAG	16	T6	A9-15	1
					BIT 5 (T2)	15	F6	TERM	
B12-24		T	C1	24					
F10-11	B11-23		C2	23					
			MS	22					

12151 LOC: B11 NAME: DR5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G13-3		T	D1	2	TAG	3	T1	A9-14	1
					BIT 6 (T2)	4	F1	TERM	
G13-6		T	D2	1	TAG	6	T2	A9-13	1
					BIT 7 (T2)	5	F2	TERM	
G13-8		T	D3	20	TAG	8	T3	A10-16	1
					PAR (T2)	7	F3	TERM	
G13-11		T	D4	19	CODE	12	T4	A10-15	1
					BIT 0 (T2)	11	F4	TERM	
G13-13		T	D5	18	CODE	14	T5	A10-14	1
					BIT 1 (T2)	13	F5	TERM	
G13-15		T	D6	17	CODE	16	T6	A10-13	1
					BIT 2 (T2)	15	F6	TERM	
E10-13	B9-24		C1	24					
B10-23		T	C2	23					
			MS	22					

12151 LOC: B12 NAME: DR6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G07-7		T	D1	2	CACHE	3	T1	A7-13	1
					INVAL (T2)	4	F1	TERM	
E02-14		T	D2	1	EXCH	6	T2	A11-16	1
					BIT 0 (T2)	5	F2	TERM	
E03-14		T	D3	20	EXCH	8	T3	A11-15	1
					BIT 1 (T2)	7	F3	TERM	
PIC-158		T	D4	17	ADR	16	T4	B12-19	1
					BIT 0 (T2)	15	F4	TERM	
PIC-146		T	D5	18	RFRC	14	T5	A11-13	1
					(T2)	13	F5	TERM	
B12-16		T	D6	19	ADRS	12	T6	A11-14	
					BIT 1 (T2)	11	F6	TERM	
E10-15	B10-24		C1	24					
F10-7		T	C2	23					
			MS	22					

NOTES: △1 G04-HI SOURCE TO: G3-20 TO1 G3-19
G3-22
G2-20 TO G2-22
G2-19 TO F3-20
F3-19,
UNTERMINATED

12145 LOC: A07 NAME: DB0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G04-8		T	D3	16	RESP CD 0	7	T3	D7-2	1
G04-13		T	D2	15	RESP CD 1	8	T2	D7-1	1
G04-12		T	D1	14	RESP CD 2	11	T1	D7-20	1
B12-3		T	D0	13	CACHE IN.	12	T0	D9-20	1
F6-4	A8-2		W3	2					
F6-5	A8-1		W2	1					
F6-7	A8-24		W1	24					
F6-11	A8-23		W0	23					
A8-3		T	S3	3					
A8-4		T	S2	4					
A8-5		T	S1	5					
A8-6		T	S0	6					
C2-23		T	C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: A08 NAME: DB1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B10-3		T	D3	16	TAG BIT 0	7	T3	D7-19	1
B10-6		T	D2	15	TAG BIT 1	8	T2	D7-18	1
B10-8		T	D1	14	TAG BIT 2	11	T1	D7-17	1
B10-12		T	D0	13	TAG BIT 3	12	T0	D8-2	1
A7-2	A9-2		W3	2					
A7-1	A9-1		W2	1					
A7-24	A9-24		W1	24					
A7-23	A9-23		W0	23					
A9-3	A7-3		S3	3					
A9-4	A7-4		S2	4					
A9-5	A7-5		S1	5					
A9-6	A7-6		S0	6					
A9-20		T	C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: A09 NAME: DB2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B10-14		T	D3	16	TAG BIT 4	7	T3	D8-1	1
B10-16		T	D2	15	TAG BIT 5	8	T2	D8-20	1
B11-3		T	D1	14	TAG BIT 6	11	T1	D8-19	1
B11-6		T	D0	13	TAG BIT 7	12	T0	D8-18	1
A8-2	A10-2		W3	2					
A8-1	A10-1		W2	1					
A8-24	A10-24		W1	24					
A8-23	A10-23		W0	23					
A10-3	A8-3		S3	3					
A10-4	A8-4		S2	4					
A10-5	A8-5		S1	5					
A10-6	A8-6		S0	6					
C2-8	A8-20		C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: A10 NAME: DB3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B11-8		T	D3	16	TAG PAR	7	T3	D8-17	1
B11-12		T	D2	15	CODE BIT 0	8	T2	E6-1	1
B11-14		T	D1	14	CODE BIT 1	11	T1	E6-20	1
B11-16		T	D0	13	CODE BIT 2	12	T0	E6-19	1
A9-2	A11-2		W3	2					
A9-1	A11-1		W2	1					
A9-24	A11-24		W1	24					
A9-23	A11-23		W0	23					
A11-3	A9-3		S3	3					
A11-4	A9-4		S2	4					
A11-5	A9-5		S1	5					
A11-6	A9-6		S0	6					
C2-7	A11-20		C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: A11 NAME: DB4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B12-6		T	D3	16	EXCH BIT 0	7	T3	D9-2	1
B12-8		T	D2	15	EXCH BIT 1	8	T2	D9-1	1
B12-12		T	D1	14	ADRS BIT 1	11	T1	E6-2	1
B12-14		T	D0	13	RFRC	12	T0	E6-18	1
A10-2		T	W3	2					
A10-1		T	W2	1					
A10-24		T	W1	24					
A10-23		T	W0	23					
D10-3	A10-3		S3	3					
D10-6	A10-4		S2	4					
D10-8	A10-5		S1	5					
D10-12	A10-6		S0	6					
A10-20		T	C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12160 LOC: G14 NAME: RCP

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
B09-11	PIA-25		A1	13	RESP CD 0	11	T1	PIA-30	1
A12-8	PIA-27		A2	14	RESP CD 1				
			A3	15					
			A4	16					
			A5	17					
			A6	18					
			A7	19					
PIC-182		T	A8	20	INV PAR				
C12-16	PIA-29		P1	12	RESP CD 2				

12117 LOC: G03 NAME: PC00

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G03-24	F03-1		A1	1	BYTE 0 PW CONTROL BIT 0	11	T1	G5-2	1
PIC-24	G3-3		B1	2		12	F1	TERM	
PIC-27	G3-1		C1	24					
E3-23	G3-18		D1	23					
G04 HI	G3-19 △1		E1	20					

12117 LOC: G03 NAME: PC01

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G3-5	F3-5		A1	4	BYTE 1 PW CONTROL BIT 0	7	T1	G5-1	1
G3-2	G2-2		B1	3		8	F1	TERM	
PIC-19	G3-4		C1	5					
G3-18	G2-23		D1	6					
G3-20	△1		E1	22					

12117 LOC: G03 NAME: PC02

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-23	G3-17		A1	16	BYTE 2 PW CONTROL BIT 0	14	T1	G5-20	1
G2-15	E3-3		B1	15		13	F1	TERM	
G3-16	F3-16		C1	17					
G3-23	G3-6		D1	18					
G3-20	F3-22		E1	19					

12117 LOC: G02 NAME: PC03

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-12	G2-24		A1	1	BYTE 3 PW CONTROL BIT 0	11	T1	G5-19	
G3-3	G2-3		B1	2		12	F1	TERM	
G2-1	F2-1		C1	24					
G3-6	G2-6		D1	23					
G3-20	G2-22		E1	20					

12117 LOC: G02 NAME: PC04

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G2-5	F2-5		A1	4	BYTE 4 PW CONTROL BIT 0	7	T1	G5-18	1
G2-2	G2-15		B1	3		8	F1	TERM	
PIC-08	G2-4		C1	5					
G2-23	G2-18		D1	6					
G2-20	△1		E1	22					

12117 LOC: G02 NAME: PC05

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-07	G2-17		A1	16	BYTE 5 PW CONTROL BIT 0	14	T1	G5-17	1
G2-3	G3-15		B1	15		13	F1	TERM	
G2-16	F2-16		C1	17					
G2-6		T	D1	18					
G2-22	△1		E1	19					

12117 LOC: E03 NAME: PC06

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E2-24	E3-24		A1	1	BYTE 6 PW CONTROL BIT 0	11	T1	F5-2	1
E3-3		T	B1	2		12	F1	TERM	
E3-1		T	C1	24					
E3-6	G3-23		D1	23					
E3-22	△1		E1	20					

12117 LOC: E03 NAME: PC07

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E3-5	E2-4		A1	4	BYTE 7 PW CONTROL BIT 0	7	T1	F5-1	1
G3-15	E3-2		B1	3		8	F1	TERM	
PIC-15	E3-4		C1	5					
C2-11	E3-23		D1	6					
E4-HI	E3-20		E1	22					

12117 LOC: F03 NAME: PC10

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G3-1	F3-24		A1	1	BYTE 0 PW CONTROL BIT 1	11	T1	F5-20	1
PIC-28	F3-3		B1	2		12	F1	TERM	
F3-1		T	C1	24					
F3-18		T	D1	23					
F3-22	F3-19		E1	20					

12117 LOC: F03 NAME: PC11

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F3-5		T	A1	4	BYTE 1 PW CONTROL BIT 1	7	T1	F5-19	1
F3-2	F2-2		B1	3		8	F1	TERM	
G3-4	F3-4		C1	5					
F2-6	F3-18		D1	6					
G3-19	F3-20		E1	22					

12117 LOC: F03 NAME: PC12

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G3-16	F3-17		A1	16	BYTE 2 PW CONTROL BIT 1	14	T1	F5-18	
E2-2		T	B1	15		13	F1	TERM	
F3-16		T	C1	17					
F3-6	F3-23		D1	18					
F3-20	△1		E1	19					

12117 LOC: F02 NAME: PC13

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G2-24	F2-24		A1	1	BYTE 3 PW CONTROL BIT 1	11	T1	F5-17	1
F3-3	F2-3		B1	2		12	F1	TERM	
F2-1		T	C1	24					
F2-18	F2-6		D1	23					
F2-22	F2-19		E1	20					

12117 LOC: F02 NAME: PC14

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F2-5		T	A1	4	BYTE 4 PW CONTROL BIT 1	7	T1	E5-2	1
F2-2	F2-15		B1	3		8	F1	TERM	
G2-4	F2-4		C1	5					
F2-23	F3-6		D1	6					
F2-HI	F2-20		E1	22					

CONTROL DATA CORPORATION ARDEN HILLS OPERATIONS	LEVEL 4 BACKUP CHART SUPPLEMENTAL WIRING INFORMATION CMC 4.11-04 3BVH; CIL/3V01 AD112-C	CODE IDENT 34010	D	DWG NO 60458190 SHEET CMC 4.11-04A 17-142
				REV J

12117 LOC: F02 NAME: PC15

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G2-17	F2-17		A1	16	BYTE 5 PW CONTROL BIT 1	14	T1	E5-1	1
F2-3	E2-3		B1	15		13	F1	TERM	
F2-16		T	C1	17					
E2-23	F2-23		D1	18					
F2-20	E2-22		E1	19					

12117 LOC: E02 NAME: PC16

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-20	E2-24		A1	1	BYTE 6 PW CONTROL BIT 1	11	T1	E5-20	1
E2-3	F3-15		B1	2		12	F1	TERM	
E2-1	E3-1		C1	24					
E2-6	F2-18		D1	23					
E2-22	E2-19		E1	20					

12117 LOC: E02 NAME: PC17

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E3-4	E2-5		A1	4	BYTE 7 PW CONTROL BIT 1	7	T1	E5-19	1
F2-15	E2-2		B1	3		8	F1	TERM	
E2-4		T	C1	5					
C2-12	E2-23		D1	6					
F2-19	E2-20		E1	22					

12151 LOC: G5 NAME: PWC0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G3-11		T	D1	2	BYTE 0 PW	3	T1	PIC-71	
					CONT BIT 0	4	F1	TERM	
G3-7		T	D2	1	BYTE 1 PW	6	T2	PIC-64	
					CONT BIT 0	5	F2	TERM	
G3-14		T	D3	20	BYTE 2 PW	8	T3	PIC-56	
					CONT BIT 0	7	F3	TERM	
G2-11		T	D4	19	BYTE 3 PW	12	T4	PIC-51	
					CONT BIT 0	11	F4	TERM	
G2-7		T	D5	18	BYTE 4 PW	14	T5	PIC-67	
					CONT BIT 0	13	F5	TERM	
G2-14		T	D6	17	BYTE 5 PW	16	T6	PIC-68	
					CONT BIT 0	15	F6	TERM	
G9-3	F5-24		C1	24					
F9-2	F5-23		C2	23					
			MS	22					

12151 LOC: F5 NAME: PWC1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E3-11		T	D1	2	BYTE 6 PW	3	T1	PIC-75	
					CONT BIT 0	4	F1	TERM	
E3-7		T	D2	1	BYTE 7 PW	6	T2	PIC-63	
					CONT BIT 0	5	F2	TERM	
F3-11		T	D3	20	BYTE 0 PW	8	T3	PIC-55	
					CONT BIT 1	7	F3	TERM	
F3-7		T	D4	19	BYTE 1 PW	12	T4	PIC-52	
					CONT BIT 1	11	F4	TERM	
F3-14		T	D5	18	BYTE 2 PW	14	T5	PIC-60	
					CONT BIT 1	13	F5	TERM	
F2-11		T	D6	17	BYTE 3 PW	16	T6	PIC-76	
					CONT BIT 1	15	F6	TERM	
G5-24		T	C1	24					
G5-23		T	C2	23					
			MS	22					

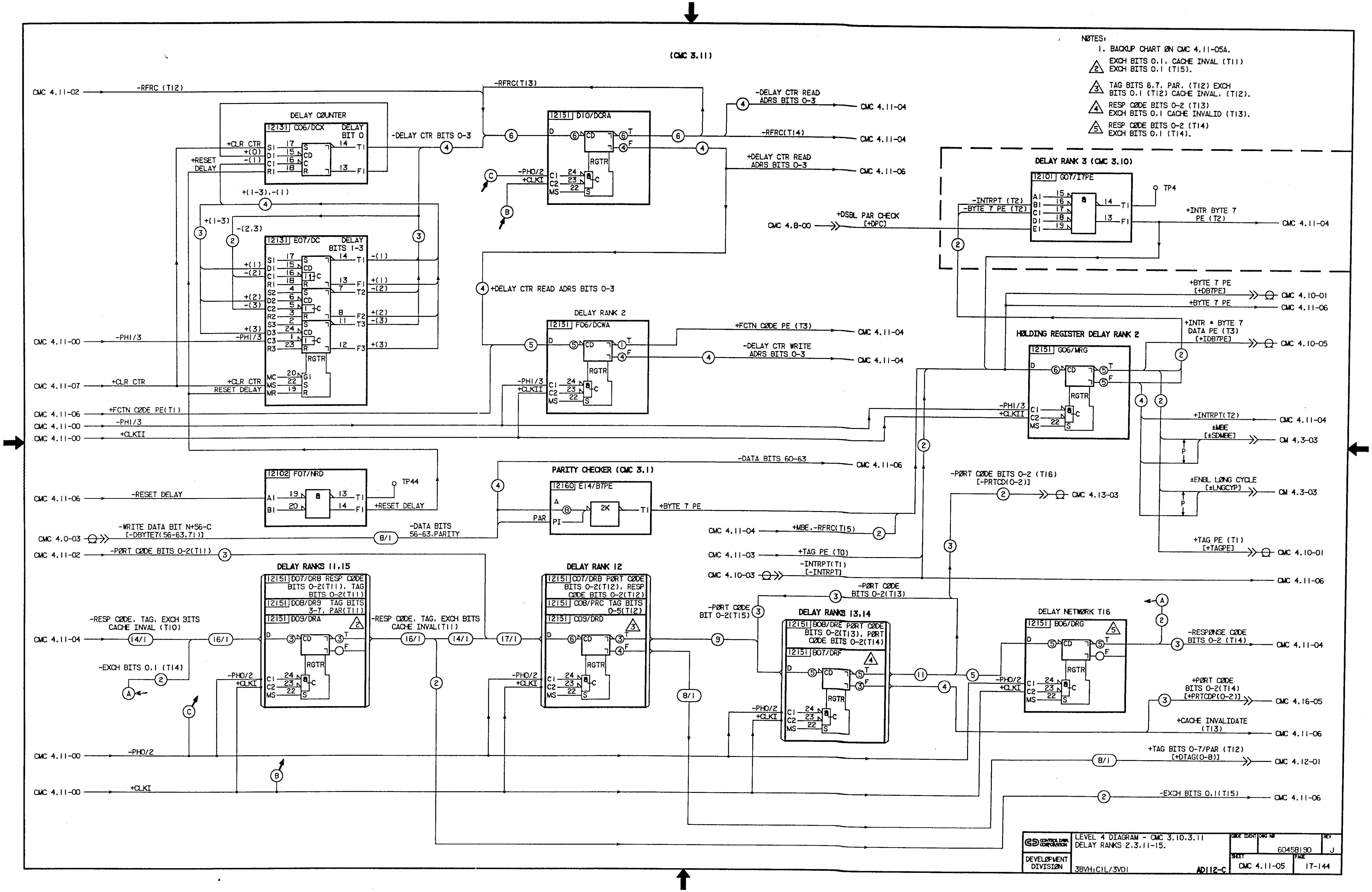
12151 LOC: E5 NAME: PWC2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F2-7		T	D1	2	BYTE 4 PW	3	T1	PIC-72	
					CONT BIT 1	4	F1	TERM	
F2-14		T	D2	1	BYTE 5 PW	6	T2	PIC-59	
					CONT BIT 1	5	F2	TERM	
E2-11		T	D3	20	BYTE 6 PW	8	T3	PIC-47	
					CONT BIT 1	7	F3	TERM	
E2-7		T	D4	19	BYTE 7 PW	12	T4	PIC-48	
					CONT BIT 1	11	F4	TERM	
C12-18		T	D5	18	MBE	14	T5	G6-20	1
						13	F5	TERM	
C3-13		T	D6	17	RFRC (T17)	16	T6	G6-19	
						15	F6	TERM	
E6-24		T	C1	24					
E6-23		T	C2	23					
			MS	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.11-04
3BVH; CIL/3V01 AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.11-048
17-143



NØTES:

1. BACKUP CHART ØN CMC 4.11-05A.

2. EXCH BITS 0.1. CACHE INVAL (T11) EXCH BITS 0.1 (T15).

3. TAG BITS 6.7. PAR. (T12) EXCH BITS 0.1 (T12) CACHE INVAL. (T12).

4. RESP CØDE BITS 0-2 (T13) EXCH BITS 0.1 CACHE INVALID (T13).

5. RESP CØDE BITS 0-2 (T14) EXCH BITS 0.1 (T14).

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM - CMC 3.10.3.11
DELAY RANKS 2.3.11-15.

3BVH:CIL/3V01 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.11-05	17-144

12151 LOC: D10 NAME: DCRA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C6-14		T	D1	2	DELAY RD	3	T1	A11-3	5
					ADRS BIT 0	4	F1	F6-2	2
C6-16		T	D2	1	DELAY RD	6	T2	A11-4	5
					ADRS BIT 1	5	F2	F6-1	2
E7-16		T	D3	20	DELAY RD	8	T3	A11-5	5
					ADRS BIT 2	7	F3	F6-20	2
E7-5		T	D4	19	DELAY RD	12	T4	A11-6	5
					ADRS BIT 3	11	F4	F6-19	2
E6-16		T	D5	18	RFRC	14	T5	D10-17	1
					(T14)	13	F5	TERM	
D10-14		T	D6	17	RFRC	16	T6	C3-19	1
					(T16)	15	F6	TERM	
G9-16	D09-24		C1	24					
F9-18	D09-23		C2	23					
			MS	22					

•D11 IS UNUSED

12151 LOC: F06 NAME: DCWA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D10-4	G1-1		D1	2	DELAY WRT	3	T1	TERM	
					ADRS BIT 0	4	F1	A7-2	5
D10-5	G1-22		D2	1	DELAY WRT	6	T2	TERM	
					ADRS BIT 1	5	F2	A7-1	5
D10-7	G1-19		D3	20	DELAY WRT	8	T3	TERM	
					ADRS BIT 2	7	F3	A7-24	5
D10-11	G1-17		D4	19	DELAY WRT	12	T4	TERM	
					ADRS BIT 3	11	F4	A7-23	5
PIC-044	E11-05		D5	18	FUNC CODE	14	T5	G04-04	
					PE (T1)	13	F5	TERM	
			D6	17		16	T6		
						15	F6		
E10-4	G6-24		C1	24					
F10-18	G6-23		C2	23					
			MS	22					

12160 LOC: E14 NAME: B7PE

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P2B-40		T	A1	1	BIT 56	7	T1	E12-22	6
P2B-39		T	A2	2	BIT 57				
P2B-37		T	A3	3	BIT 58				
P2B-36		T	A4	4	BIT 59				
P2B-35	E12-2		A5	5	BIT 60				
P2B-34	E12-1		A6	22	BIT 61				
P2B-32	E12-15		A7	23	BIT 62				
P2B-31	E11-2		A8	24	BIT 63				
P2B-29		T	P1	6	PARITY				

12151 LOC: G06 NAME: MRG

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G7-13	G4-24		D1	2	INTRPT BYTE 7	3	T1	PIC-79	
					DATA PE (T3)	4	F1	TERM	
E11-4	PIC-80		D2	1	BYTE 7	6	T2	TERM	
					PE	5	F2	G7-17	1
E5-14		T	D3	20	MBE	8	T3	P2A-36	
						7	F3	P2A-34	
E5-16		T	D4	19	ENABLE	12	T4	P2A-37	
					LONG CYCLE	11	F4	P2A-35	
PIC-83	E11-3		D5	18	INTRPT	14	T5	G7-16	1
						13	F5	B1-1	1
G14-7		T	D6	17	TAG	16	T6	PIC-149	
					PE (T1)	15	F6	TERM	
F6-24		T	C1	24					
F6-23		T	C2	23					
			MS	22					

12151 LOC: D07 NAME: DR8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A7-7		T	D1	2	RESP CODE	3	T1	C7-19	1
					BIT 0 (T13)	4	F1	TERM	
A7-8		T	D2	1	RESP CODE	6	T2	C7-18	1
					BIT 1 (T13)	5	F2	TERM	
A7-11		T	D3	20	RESP CODE	8	T3	C7-17	1
					BIT 2 (T13)	7	F3	TERM	
A8-7		T	D4	19	TAG	12	T4	C8-2	1
					BIT 0 (T13)	11	F4	TERM	
A8-8		T	D5	18	TAG	14	T5	C8-1	1
					BIT 1 (T13)	13	F5	TERM	
A8-11		T	D6	17	TAG	16	T6	C8-20	1
					BIT 2 (T13)	15	F6	TERM	
G9-6	B7-24		C1	24					
F9-7		T	C2	23					
			MS	22					

12151 LOC: D08 NAME: DR9

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A8-12		T	D1	2	TAG	3	T1	C8-19	1
					BIT 3 (T13)	4	F1	TERM	
A9-7		T	D2	1	TAG	6	T2	C8-18	1
					BIT 4 (T13)	5	F2	TERM	
A9-8		T	D3	20	TAG	8	T3	C8-17	1
					BIT 5 (T13)	7	F3	TERM	
A9-11		T	D4	19	TAG	12	T4	C9-2	1
					BIT 6 (T13)	11	F4	TERM	
A9-12		T	D5	18	TAG	14	T5	C9-1	1
					BIT 7 (T13)	13	F5	TERM	
A10-7		T	D6	17	TAG	16	T6	C9-20	1
					PAR (T13)	15	F6	TERM	
G9-15		T	C1	24					
C8-23		T	C2	23					
			MS	22					

12151 LOC: D09 NAME: DRA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A11-7		T	D1	2	EXCH	3	T1	C9-19	1
					BIT 0 (T13)	4	F1	TERM	
A11-8		T	D2	1	EXCH	6	T2	C9-18	1
					BIT 1 (T13)	5	F2	TERM	
A7-12		T	D3	20	CACHE	8	T3	C9-17	1
					INVAL (T13)	7	F3	TERM	
B06-12		T	D4	19	EXCH	12	T4	D13-19	
					BIT 0 (T17)	11	F4	TERM	
B06-14		T	D5	18	EXCH	14	T5	D13-18	
					BIT 1 (T17)	13	F5	TERM	
			D6	17		16	T6		
						15	F6		
D10-24		T	C1	24					
D10-23		T	C2	23					
			MS	22					

12151 LOC: C07 NAME: DRB

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E6-6		T	D1	2	PORT CODE	3	T1	B8-2	1
					BIT 0 (T14)	4	F1	TERM	
F1-16		T	D2	1	PORT CODE	6	T2	B8-1	1
					BIT 1 (T14)	5	F2	TERM	
F1-15		T	D3	20	PORT CODE	8	T3	B8-20	
					BIT 2 (T14)	7	F3	TERM	
D7-3		T	D4	19	RESP CODE	12	T4	B7-2	1
					BIT 0 (T14)	11	F4	TERM	
D7-6		T	D5	18	RESP CODE	14	T5	B7-1	1
					BIT 1 (T14)	13	F5	TERM	
D7-8		T	D6	17	RESP CODE	16	T6	B7-20	1
					BIT 2 (T14)	15	F6	TERM	
G8-14	B6-24		C1	24					
F8-11		T	C2	23					
			MS	22					

12151 LOC: C08 NAME: DRC

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D7-12		T	D1	2	TAG	3	T1	TERM	
					BIT 0 (T14)	4	F1	PIA-11	
D7-14		T	D2	1	TAG	6	T2	TERM	
					BIT 1 (T14)	5	F2	PIA-12	
D7-16		T	D3	20	TAG	8	T3	TERM	
					BIT 2 (T14)	7	F3	PIA-14	
D8-3		T	D4	19	TAG	12	T4	TERM	
					BIT 3 (T14)	11	F4	PIA-15	
D8-6		T	D5	18	TAG	14	T5	TERM	
					BIT 4 (T14)	13	F5	PIA-16	
D8-8		T	D6	17	TAG	16	T6	TERM	
					BIT 5 (T14)	15	F6	PIA-17	
G9-13	B8-24		C1	24					
F9-17	D8-23		C2	23					
			MS	22					

12151 LOC: C09 NAME: DRD

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D8-12		T	D1	2	TAG	3	T1	TERM	
					BIT 6 (T14)	4	F1	PIA-19	
D8-14		T	D2	1	TAG	6	T2	TERM	
					BIT 7 (T14)	5	F2	PIA-20	
D8-16		T	D3	20	TAG	8	T3	TERM	
					PAR (T14)	7	F3	PIA-21	
D9-3		T	D4	19	EXCH	12	T4	B7-19	1
					BIT 0 (T14)	11	F4	TERM	
D9-6		T	D5	18	EXCH	14	T5	B7-18	1
					BIT 1 (T14)	13	F5	TERM	
D9-8		T	D6	17	CACHE	16	T6	B7-17	1
					INVAL (T14)	15	F6	TERM	
G9-5		T	C1	24					
B8-23		T	C2	23					
			MS	22					

12151 LOC: B08 NAME: DRE

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C7-3		T	D1	2	PORT CODE	3	T1	B8-19	1
					BIT 0 (T15)	4	F1	TERM	
C7-6		T	D2	1	PORT CODE	6	T2	B8-18	1
					BIT 1 (T15)	5	F2	TERM	
C7-8		T	D3	20	PORT CODE	8	T3	B8-17	1
					BIT 2 (T15)	7	F3	TERM	
B8-3		T	D4	19	PORT CODE	12	T4	PIC-101	
					BIT 0 (T16)	11	F4	PIC-102	
B8-6		T	D5	18	PORT CODE	14	T5	PIC-84	
					BIT 1 (T16)	13	F5	PIC-87	
B8-8		T	D6	17	PORT CODE	16	T6	PIC-113	
					BIT 2 (T16)	15	F6	PIC-106	
C8-24		T	C1	24					
F9-8	C9-23		C2	23					
			MS	22					

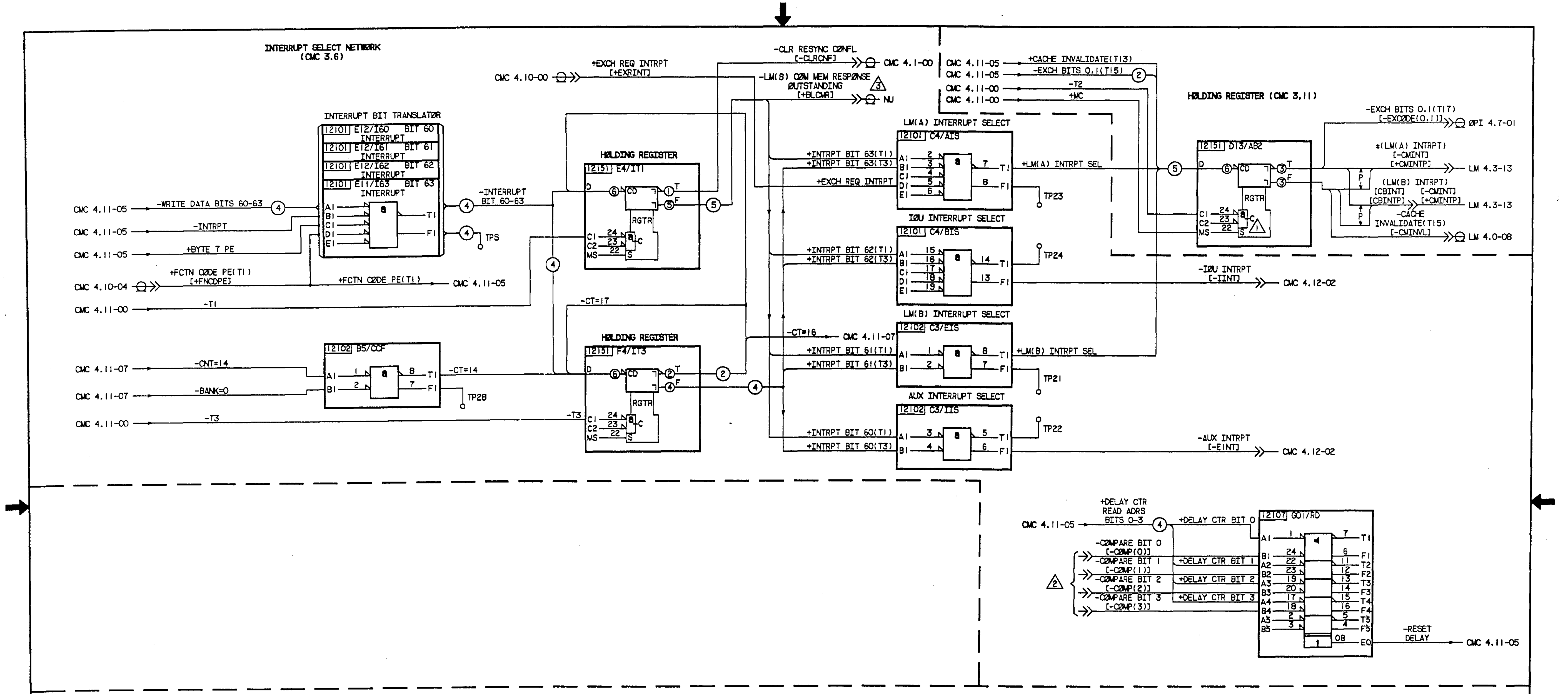
12151 LOC: B07 NAME: DRF

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C7-12		T	D1	2	RESP CODE	3	T1	B6-2	1
					BIT 0 (T15)	4	F1	TERM	
C7-14		T	D2	1	RESP CODE	6	T2	B6-1	1
					BIT 1 (T15)	5	F2	TERM	
C7-16		T	D3	20	RESP CODE	8	T3	B6-20	1
					BIT 2 (T15)	7	F3	TERM	
C9-12		T	D4	19	EXCH	12	T4	B6-19	1
					BIT 0 (T15)	11	F4	TERM	
C9-14		T	D5	18	EXCH	14	T5	B6-18	1
					BIT 1 (T15)	13	F5	TERM	
C9-16		T	D6	17	CACHE	16	T6	TERM	
					INVALID (T15)	15	F6	D13-17	
D7-24		T	C1	24					
F9-12	B6-23		C2	23					
			MS	22					

12151 LOC: B06 NAME: DRG

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B7-3		T	D1	2	RESP CODE	3	T1	B9-19	1
					BIT 0 (T16)	4	F1	TERM	
B7-6		T	D2	1	RESP CODE	6	T2	B9-18	1
					BIT 1 (T16)	5	F2	TERM	
B7-8		T	D3	20	RESP CODE	8	T3	B9-17	1
					BIT 2 (T16)	7	F3	TERM	
B7-12		T	D4	19	EXCH	12	T4	D09-19	1
					BIT 0 (T16)	11	F4	TERM	
B7-14		T	D5	18	EXCH	14	T5	D09-18	1
					BIT 1 (T16)	13	F5	TERM	
			D6	17		16	T6		
						15	F6		
C7-24		T	C1	24					
B7-23		T	C2	23					
			MS	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS
LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.11-05
3BVH; CIL/3V01 AD112-C
CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.11-05A
17-145


INTERRUPT SELECT NETWORK (CMC 3.6)
INTERRUPT BIT TRANSLATOR
12101 E12/I60 BIT 60 INTERRUPT
12101 E12/I61 BIT 61 INTERRUPT
12101 E12/I62 BIT 62 INTERRUPT
12101 E11/I63 BIT 63 INTERRUPT
CMC 4.11-05 -WRITE DATA BITS 60-63
CMC 4.11-05 -INTRPT
CMC 4.11-05 +BYTE 7 PE
CMC 4.10-04 +FCTN CODE PE(T1) [+FNCDPE]
+FCTN CODE PE(T1) CMC 4.11-05
CMC 4.11-00 -T1
-INTERRUPT BIT 60-63
TPS
CMC 4.10-00 +EXCH REQ INTRPT [+EXRINT]
HOLDING REGISTER 12151 E4/IT1
HOLDING REGISTER 12151 F4/IT3
RGTR
-CT=17
12102 B5/CCF
CMC 4.11-07 -CNT=14
CMC 4.11-07 -BANK=0
CMC 4.11-00 -T3
-CT=14
TP28
-CLR RESYNC CONFL [-CLRCNF] CMC 4.1-00
-LM(B) COM MEM RESPONSE OUTSTANDING [+BLCMR] NU
LM(A) INTERRUPT SELECT 12101 C4/AIS
+INTRPT BIT 63(T1)
+INTRPT BIT 63(T3)
+EXCH REQ INTRPT
+LM(A) INTRPT SEL
TP23
IOU INTERRUPT SELECT 12101 C4/BIS
+INTRPT BIT 62(T1)
+INTRPT BIT 62(T3)
TP24
-IOU INTRPT [-IINT] CMC 4.12-02
LM(B) INTERRUPT SELECT 12102 C3/EIS
-CT=16 CMC 4.11-07
+INTRPT BIT 61(T1)
+INTRPT BIT 61(T3)
+LM(B) INTRPT SEL
TP21
AUX INTERRUPT SELECT 12102 C3/IIS
+INTRPT BIT 60(T1)
+INTRPT BIT 60(T3)
TP22
-AUX INTRPT [-EINT] CMC 4.12-02
CMC 4.11-05 +CACHE INVALIDATE(T13)
CMC 4.11-05 -EXCH BITS 0,1(T15)
CMC 4.11-00 -T2
CMC 4.11-00 +MC
HOLDING REGISTER (CMC 3.11)
12151 D13/AB2
-EXCH BITS 0,1(T17) [-EXCODE(0,1)] OPI 4.7-01
±(LM(A) INTRPT) [-CMINT] [+CMINTP] LM 4.3-13
(LM(B) INTRPT) [CBINT] [-CMINT] [CBINTP] [+CMINTP] LM 4.3-13
-CACHE INVALIDATE(T15) [-CMINVL] LM 4.0-08
CMC 4.11-05 +DELAY CTR READ ADRS BITS 0-3
+DELAY CTR BIT 0
12107 G01/RD
-COMPARE BIT 0 [-COMP(0)]
-COMPARE BIT 1 [-COMP(1)]
-COMPARE BIT 2 [-COMP(2)]
-COMPARE BIT 3 [-COMP(3)]
+DELAY CTR BIT 1
+DELAY CTR BIT 2
+DELAY CTR BIT 3
-RESET DELAY CMC 4.11-05

NOTES:

1. BACKUP CHART ON CMC 4.11-06A.

2. LEAVE THESE LINES UNTERMINATED. CONNECT B TERMS TO AN EXTERNAL 'HI' FOR ANY CORRESPONDING A TERM DELAY CTR BITS THAT ARE REQUITED TO GENERATE THE RESET DELAY SITNAL. LEAVE THE REMAINING B TERMS OPEN. IE. FOR THE 7 RANK DELAY CONNECT B1, B2 AND B3 TO AN EXTERNAL HI.

   TWO PIN PLUGS SHOULD BE CONNECTED AS FOLLOWS ON CIA INTERCONNECT BOARD TO CONNECT APPROPRIATE 'B' INPUTS TO EXTERNAL 'HI'S'.

CIA INT. BD. LOC.	DELAY CNTR BIT	STATUS
M5 19.20	0	OPEN
M5 17.18	1	PLUG
M5 15.16	2	PLUG
M5 13.14	3	PLUG

3. BLCMR IS TIED HI WITH SIGNAL ZERO(4) ON SHEET CMC 4.11-07.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM - CMC 3.6 INTRPT SELECT NETWORKS	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION	38VH;C1L/3V01 AD112-C	SHEET CMC 4.11-06		PAGE 17-146

12101 LOC: E12 NAME: I60

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E14-5		T	A1	2	BIT 60	7	T1	E4-20	2
E11-3	E12-16		B1	3	INTRPT	8	F1	TP-41	
E12-17	E11-4		C1	4	BYTE 7 PE				
E11-05	E12-23		D1	5	FUNC PE				
			E1	6					

12101 LOC: E12 NAME: I61

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E14-22		T	A1	1	BIT 61	11	T1	E4-19	2
E12-16		T	B1	20	INTRPT	12	F1	TP-36	
E14-7	E12-17		C1	22	BYTE 7 PE				
E12-05	E12-18		D1	23	FUNC PE				
			E1	24					

12101 LOC: E12 NAME: I62

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E14-23		T	A1	15	BIT 62	14	T1	E4-18	2
E12-3	E12-20		B1	16	INTRPT	13	F1	TP-38	
E12-22	E12-4		C1	17	BYTE 7 PE				
E12-23		T	D1	18	FUNC PE				
			E1	19					

12101 LOC: E11 NAME: I63

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E14-24		T	A1	2	BIT 63	7	T1	E4-17	2
G6-18	E12-3		B1	3	INTRPT	8	F1	TP-33	
E12-4	G6-1		C1	4	BYTE 7 PE				
F06-18	E12-05		D1	5	FUNC PE				
			E1	6					

12151 LOC: E4 NAME: IT1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F4-1		T	D1	2	CLEAR	3	T1	PIC-43	1
					CONFLICT	4	F1	TERM	
E12-7	F4-20		D3	20	INTRPT	8	T3	TERM	
					BIT 60 (T1)	7	F3	C3-3	1
E12-11	F4-19		D4	19	INTRPT	12	T4	TERM	
					BIT 61 (T1)	11	F4	C3-1	1
E12-14	F4-18		D5	18	INTRPT	14	T5	TERM	
					BIT 62 (T1)	13	F5	C4-15	1
E11-7	F4-17		D6	17	INTRPT	16	T6	TERM	
					BIT 63 (T1)	15	F6	C4-2	1
F8-18	D5-16		C1	24					
			C2	23					
			MS	22					

12151 LOC: F4 NAME: IT3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B5-8		T	D1	2	CT=17	3	T1	F4-1	2
						4	F1	TERM	
F4-3	E4-2		D2	1	CT=20	6	T2	A12-15	1
						5	F2	TERM	
E4-20		T	D3	20	INTRPT	8	T3	TERM	
					BIT 60 (T3)	7	F3	C3-4	1
E4-19		T	D4	19	INTRPT	12	T4	TERM	
					BIT 61 (T3)	11	F4	C3-2	1
E4-18		T	D5	18	INTRPT	14	T5	TERM	
					BIT 62 (T3)	13	F5	C4-16	1
E4-17		T	D6	17	INTRPT	16	T6	TERM	
					BIT 63 (T3)	15	F6	C4-3	1
F8-11		T	C1	24					
			C2	23					
			MS	22					

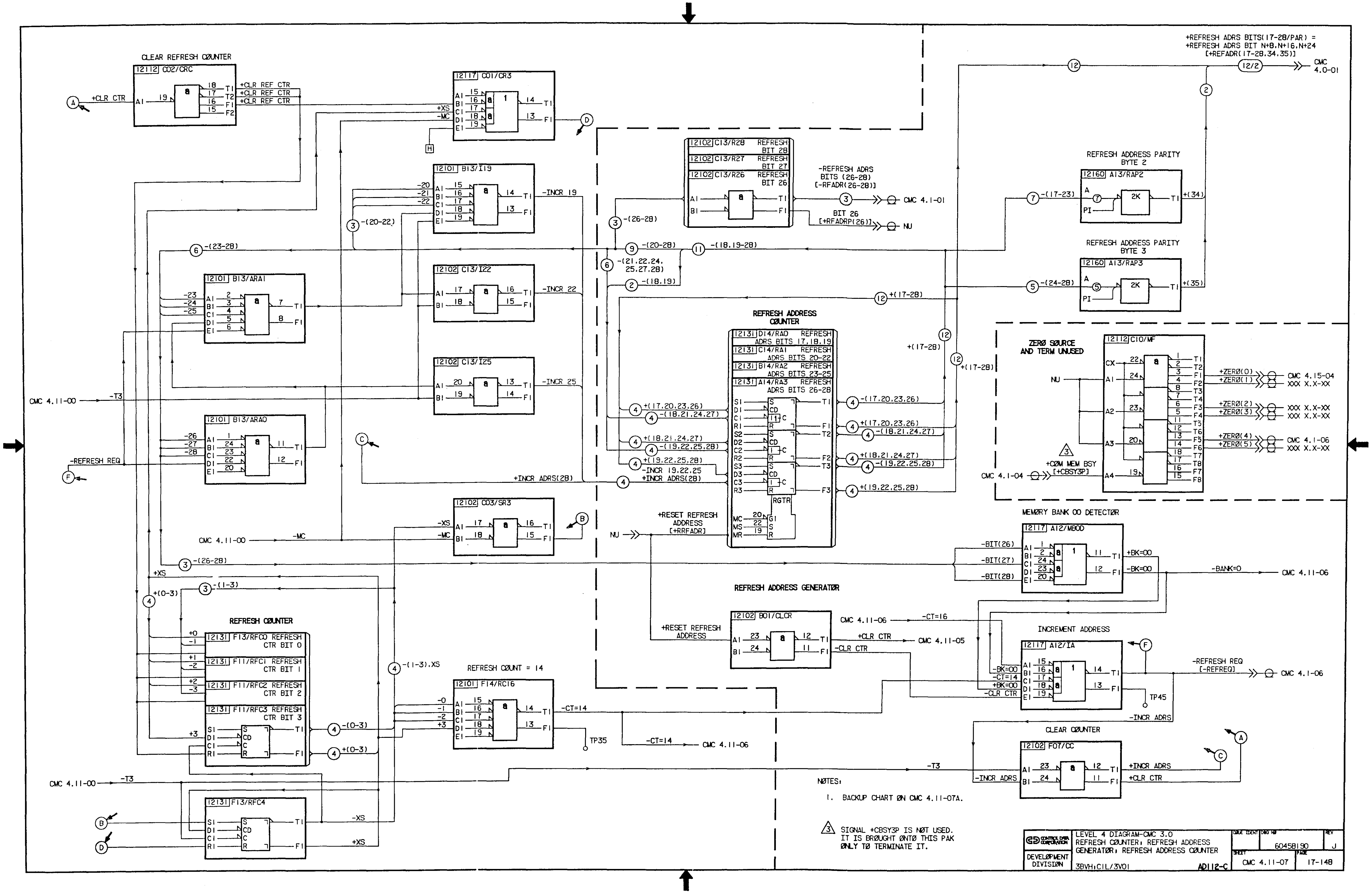
12151 LOC: D13 NAME: AB1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C4-7		T	D2	1	$P3_A$	6	T2	P2B-17	
					INTRPT	5	F2	P2B-15	
C4-14		T	D3	20	$P3_B$	8	T3	P2A-40	
					INTRPT	7	F3	P2A-39	
D09-12		T	D4	19	EXCH	12	T4	PIC-161	
					BIT 0 (T19)	11	F4	TERM	
D09-14		T	D5	18	EXCH	14	T5	PIC-185	
					BIT 1 (T19)	13	F5	TERM	
B07-15		T	D6	17	CACHE	16	T6	TERM	
					INV (T17)	15	F6	PIC-186	
E9-17	D12-24		C1	24					
			C2	23					
C02-3		T	MS	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.11-06
3BVH;CIL/3U01
AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.11-06A
17-147



NOTES:

1. BACKUP CHART ON CMC 4.11-07A.

3 SIGNAL +CBSY3P IS NOT USED.
IT IS BROUGHT ONTO THIS PAK
ONLY TO TERMINATE IT.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.0 REFRESH COUNTER, REFRESH ADDRESS GENERATOR, REFRESH ADDRESS COUNTER	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION	3BVH,C1L/3V01 AD112-C	SHEET CMC 4.11-07	PAGE 17-148	

12102 LOC: C13 NAME: R28

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B13-23		T	A1	1	REFR BIT 28	8	T1	PIC-150	
			B1	2		7	F1	TERM	

12102 LOC: C13 NAME: R27

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B13-24		T	A1	4	REFR BIT 27	5	T1	PIC-165	
			B1	3		6	F1	TERM	

12102 LOC: C13 NAME: R26

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B13-1		T	A1	24	REFR BIT 26	12	T1	PIC-154	
			B1	23		11	F1	PIC-157	

12131 LOC: D14 NAME: RA0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			S1	4	REFR ADRS BIT 17	7	T1	A13-23	1
D14-8	P2B-12		D1	6		8	F1	D14-6	
D14-11	A13-22		C1	5					
			R1	3					
			S2	2	REFR ADRS BIT 18	11	T2	D14-5	2
D14-12	P2B-11		D2	24		12	F2	D14-24	
D14-14	A13-1		C2	1					
			R2	23					
			S3	17	REFR ADRS BIT 19	14	T3	D14-1	2
D14-13	P2B-10		D3	15		13	F3	D14-15	
B13-14		T	C3	16					
			R3	18					
			MC	20					
			MS	22					
B1-23	C14-19		MR	19					

12131 LOC: C14 NAME: RA1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			S1	4	REFR ADRS BIT 20	7	T1	B13-15	2
C14-8	P2B-09		D1	6		8	F1	C14-6	
C14-11	B13-16		C1	5					
			R1	3					
			S2	2	REFR ADRS BIT 21	11	T2	C14-5	3
C14-12	P2B-07		D2	24		12	F2	C14-24	
C14-14	B13-17		C2	1					
			R2	23					
			S3	17	REFR ADRS BIT 22	14	T3	C14-1	3
C14-13	P2B-06		D3	15		13	F3	C14-15	
C13-16		T	C3	16					
			R3	18					
			MC	20					
			MS	22					
D14-19	B14-19		MR	19					

12131 LOC: B14 NAME: RA2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			S1	4	REFR ADRS BIT 23	7	T1	B13-2	2
B14-8	P2B-05		D1	6		8	F1	B14-6	
B14-11	B13-3		C1	5					
			R1	3					
			S2	2	REFR ADRS BIT 24	11	T2	B14-5	3
B14-12	P2B-04		D2	24		12	F2	B14-24	
B14-14	B13-4		C2	1					
			R2	23					
			S3	17	REFR ADRS BIT 25	14	T3	B14-1	3
B14-13	P2B-02		D3	15		13	F3	B14-15	
C13-13		T	C3	16					
			R3	18					
			MC	20					
			MS	22					
C14-19	A14-19		MR	19					

12131 LOC: A14 NAME: RA3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			S1	4	REFR ADRS BIT 26	7	T1	A13-15	4
A14-8	P2B-01		D1	6		8	F1	A14-6	
A12-24	B13-24		C1	5					
			R1	3					
			S2	2	REFR ADRS BIT 27	11	T2	A13-16	5
A14-12	P1B-40		D2	24		12	F2	A14-24	
A12-20	B13-23		C2	1					
			R2	23					
			S3	17	REFR ADRS BIT 28	14	T3	A13-17	5
A14-13	P1B-39		D3	15		13	F3	A14-15	
F07-12		T	C3	16					
			R3	18					
			MC	20					
			MS	22					
B14-19		T	MR	19					

12131 LOC: F13 NAME: RFC4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R IP	V IP	DEST	L
C03-15		T	S1	4	REFRESH BIT XS	7	T1	F11-16	2
F13-8			D1	6		8	F1	F13-6	2
F7-23		T	C1	5					
C01-13		T	R1	3					

12160 LOC: A13 NAME: RAP2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D14-1		T	A1	1	BIT 19	7	T1	P1B-36	
B13-15		T	A2	2	BIT 20				
B13-16		T	A3	3	BIT 21				
B13-17		T	A4	4	BIT 22				
B13-2		T	A5	5	BIT 23				
D14-5		T	A6	22	BIT 18				
D14-7		T	A7	23	BIT 17				
			A8	24					
			PI	6	"HI"				

12160 LOC: A13 NAME: RAP3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B13-3		T	A1	13	BIT 24	11	T1	P1B-35	
B13-4		T	A2	14	BIT 25				
A14-7	A12-1		A3	15	BIT 26				
A14-11	A12-24		A4	16	BIT 27				
A14-14	A12-20		A5	17	BIT 28				
			A6	18					
			A7	19					
			A8	20					
			PI	12	"HI"				

12131 LOC: F13 NAME: RFC0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			S1	17	REFRESH CTR BIT 0	14	T1	F14-15	1
F13-15		T	D1	15		13	F1	F13-15	1
F11-7	F14-16		C1	16					
C2-18		T	R1	18					

12131 LOC: F11 NAME: RFC1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			S1	4	REFRESH CTR BIT 1	7	T1	F13-16	2
F11-8		T	D1	6		8	F1	F11-6	1
F11-11	F14-17		C1	5					
C2-17	F11-23		R1	3					

12131 LOC: F11 NAME: RFC2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			S1	2	REFRESH CTR BIT 2	11	T1	F11-5	2
F11-12		T	D1	24		12	F1	F11-24	1
F11-14	C3-17		C1	1					
F11-3		T	R1	23					

12131 LOC: F11 NAME: RFC3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			S1	17	REFRESH CTR BIT 3	14	T1	F11-1	2
F11-13	F14-18		D1	15		13	F1	F11-15	3
F13-07		T	C1	16					
F11-13		T	R1	18					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.11-07
3BVH, C1L/3V01 AD112-C

CODE IDENT 34010 D
DWG NO 60458190
REV J
SHEET CMC 4.11-07A 17-149

NOTE:

1. LM(B) COMMON MEMORY RESPONSE CONTROL CIRCUITY HAS BEEN REMOVED FROM AD112-C.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM - CMC 3.6 LM(B) COMMON MEMORY RESPONSE CONTROL.	CAGE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION	38VH;C1L/3V01 AD112-C	SHEET CMC 4.11-08	PAGE 17-150	

LEFT ZIF △1

BIT NAME	I/Ø	SHEET CMC 4.11-	TYPE	VIRTUAL PIN	REAL PIN
CBSY	I	06			
CRESP		01			
CINT		06			
LBTØT		02			
LBTØTP		02			
CØMP(0)		06		V3C	P2A-01
(1)				3D	02
↓ (2)	↓	↓		↓ 3E	↓ 04
CØMP(3)	I	06		V3F	P2A-06
ARESP	Ø	03		VB3	P1A-04
BRESP	Ø	03		VB4	P1A-05
RESPCD(0)	Ø	04	Z	V87	P1A-25
(1)				88	27
↓ (2)		↓		89	29
RESPCD(8)		04		8A	30
DTAG(0)		05		8D	11
(1)				8E	12
(2)				8F	14
(3)				90	15
(4)				91	16
(5)				92	17
(6)				93	19
↓ (7)			↓	94	↓ 20
DTAG(8)			Z	95	P1A-21
MBEP			D	9A	P2A-36
MBE				9B	34
LNGCY		↓		9C	37
LNGCYP		05		9D	35
CBINT		06	↓	B7	↓ 39
CBINTP			D	B8	P2A-40
EINT	↓	↓	Z	B9	P1A-01
IINT	Ø	06	↓	↓ BA	↓ 02
RRFADR	I	07	Z	V41	P1A-40

CØAX △1

BIT NAME	I/Ø	SHEET CMC 4.11-	TYPE	VIRTUAL PIN	REAL PIN
NCLKN(425)	I	00	C	V00	P1C-138
NCLKN(426)				01	134
CLKPM(33)		↓		02	110
MCLR		00		03	011
HSFP1		04		04	032
DPC		05		05	098
CBSY3P		01		07	178
RSRFT2		04		40	004
MARKC(0)				19	027
(1)				1A	019
(2)				1B	023
(3)				1C	012
(4)				1D	008
(5)				1E	007
↓ (6)		↓		1F	020
MARKC(7)		04		20	015
PTCDP(0)		03		2A	174
↓ (1)				2B	170
PTCDP(2)		↓		2C	169
IREQT1		03		2D	092
PWEX		04		30	016
EXRINT		06		31	031
READ		03		32	097
WRITE		03		33	091
RSL		04		34	024
RCL		↓		35	028
RFRC		04		36	146
INTRPT		05		37	083
ILFNC		04		38	035
FNCDPE		06		39	044
RDRSP	↓	04		3A	036
BFØPE	I	04		3B	039
ALCMR (HI)	Ø	01		80	166
BLCMR		06		81	040
EXTCMB (HI)		06		82	003
DB7PE		05		8B	080
IDB7PE		05		8C	079
TAGPE		04		96	149
PRTCD(0)		05		97	101
↓ (1)		↓		98	084
PRTCD(2)		05		99	113
PWCØNT(0)		04		9E	071
(1)				9F	055
(2)				A0	064
(3)				A1	052
(4)				A2	056
(5)				A3	060
(6)				A4	051
(7)				A5	076
(8)				A6	067
(9)				A7	072
(10)				A8	068
(11)				A9	059
(12)				AA	075
(13)				AB	047
↓ (14)		↓		AC	063
PWCØNT(15)		04		AD	048
EXCØDE(0)		06		AE	181
EXCØDE(1)		↓		AF	185
CMINVL		06		B4	186
REFREQ		07		BB	088
RFADR(26)		07		CB	154
CLRCNF		06		D1	043
RFADR(27)		07		CC	165
RFADR(28)		07		CD	150
PRTCDP(0)		05		CE	102
↓ (1)	↓	↓		CF	087
PRTCDP(2)	Ø	05		D0	106
ADRSO1	I	04		0F	158
NU	Ø	07		D2	157
IRCPAR	I	04		42	182
ERESP	Ø	00		B5	117
IRESP	Ø	00	↓	↓ B6	↓ 118
DATPE	I	04	C	V43	P1C-105
CIO-14 ZERØ(5)	Ø	07	C	VLL	114
03 (0)				VGG	161
04 (1)				VHH	162
05 (2)				VII	173
↓ 06 ↓ (3)	↓	↓	↓	VJJ	177
CIO-13 ZERØ(4)	Ø	07	C	VKK	109

RIGHT ZIF △1

BIT NAME	I/Ø	SHEET CMC 4.11-	TYPE	VIRTUAL PIN	REAL PIN
DBYTE7(56)	I	05	C	V10	P2B-40
(57)				11	39
(58)				12	37
(59)				13	36
(60)				14	35
(61)				15	34
(62)				16	32
↓ (63)		↓		17	31
DBYTE7(71)		05		18	27
TAG(0)		03		21	30
(1)				22	29
(2)				23	26
(3)				24	25
(4)				25	24
(5)				26	22
(6)				27	21
↓ (7)		↓	↓	28	20
TAG(8)		03	C	29	↓ 19
SDSBE	↓	04	Z	2E	P2B-16
SDMBE	I	04		2F	P1B-22
ARDSEL(0)	Ø	02		B0	09
ARDSEL(1)				B1	10
BRDSEL(0)		↓	↓	B2	↓ 11
BRDSEL(1)		02	Z	B3	P1B-12
CMINT		06	D	B5	P2B-15
CMINTP		06	D	B6	17
REFADR(17)		07	C	BC	12
(18)				BD	11
(19)				BE	10
(20)				BF	09
(21)				C0	07
(22)				C1	06
(23)				C2	05
(24)				C3	04
(25)				C4	↓ 02
(26)				C5	P2B-01
(27)				C6	P1B-40
(28)				C7	39
(33)					
(34)				C9	36
↓ (35)	↓	↓	↓	↓ CA	↓ 35
REFADR(19)	Ø	07	C	VD3	P1B-14

ZIF GRØUND PINS

P1A-03	P1A-23	P2A-03	P2A-23
P1A-08	P1A-28	P2A-08	P2A-28
P1A-13	P1A-33	P2A-13	P2A-33
P1A-18	P1A-38	P2A-18	P2A-38

ZIF GRØUND PINS

P1B-03	P1B-23	P2B-03	P2B-23
P1B-08	P1B-28	P2B-08	P2B-28
P1B-13	P1B-33	P2B-13	P2B-33
P1B-18	P1B-38	P2B-18	P2B-38

NØTE:

△1 CØNNECTØR TYPES:

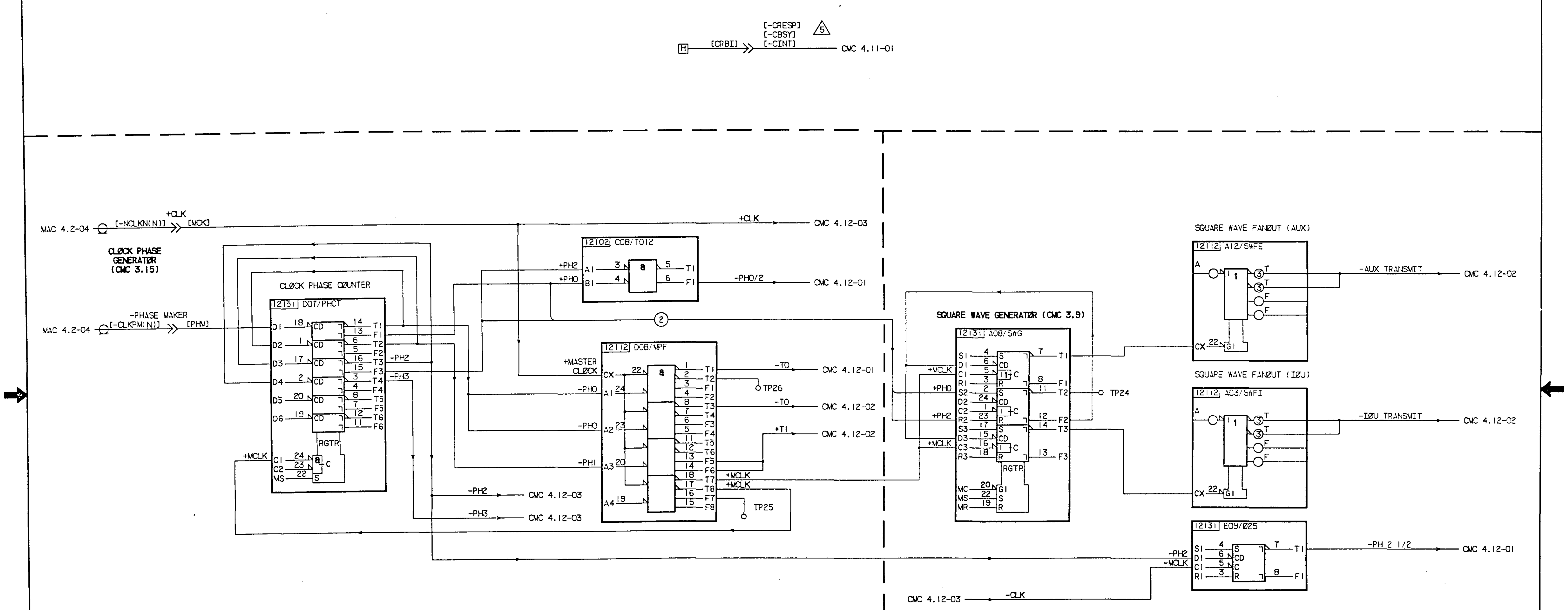
C = CØAX
D = DIFFERENTIAL
Z = ZIF TØ FØIL ØN INTERCØNNECT BØARD

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 CØNNECTØR CHART
SUPPLEMENTAL WIRING INFØRMATIØN

3BVH:CIL/3V01
AD112-C

CODE IDENT | DWG NO 60458190 | REV J
SHEET CMC 4.11-CC | PAGE 17-151



NØTES:

1. CMC 4.12A: C1G/3Q01
   4.12B: C1H/3Q02
   4.12C: C1J/3Q03
   4.12D: C1K/3Q04
   4.12E: C1M/3Q05
   4.12F: C1N/3Q06
   4.12G: C1P/3Q07
   4.12H: C1R/3Q08
   4.12J: C1S/3Q09

2. DATA BIT N+48,+56, TAG BIT N,RESP CØDE BIT N.

3. DATA BIT N+48,+56, RESP CØDE N, TAG BIT NB.

4. DATA BIT N+40,+48,+56,TAG BIT N, RESP CØDE BIT N.

5. BUSY - ØCCURRENCE 3Q05
   INTRPT - ØCCURRENCE 3Q06
   RESPØNSE - ØCCURRENCE 3Q04
   - REST NØT USED.

6. BACKUP CHART ØN CMC 4.12-00A.

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM - CMC 3.9.3.15
CØM MEM AC RECEIVER/DESKEW RGTR,
SQUARE WAVE GEN CLK PH GEN.
7BQH: 1
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.12-00	17-152

12112 LOC: A12 NAME: SWFE

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	24	AUX XMIT	1	T1	C12-18	
						2	T2	B12-17	
						3	F1	TERM	
						4	F2	TERM	
			A2	20	AUX XMIT	11	T3	B13-18	
						12	T4	C13-17	
						13	F3	TERM	
						14	F4	TERM	
			A3	19	AUX XMIT	18	T5	D13-18	
						17	T6	D12-18	
						16	F5	TERM	
						15	F6	TERM	
			A4	23		8	T7		
						7	T8		
						6	F7		
						5	F8		
A08-7		T	CX	22	SQ. WAVE GEN.				

12112 LOC: A03 NAME: SWFI

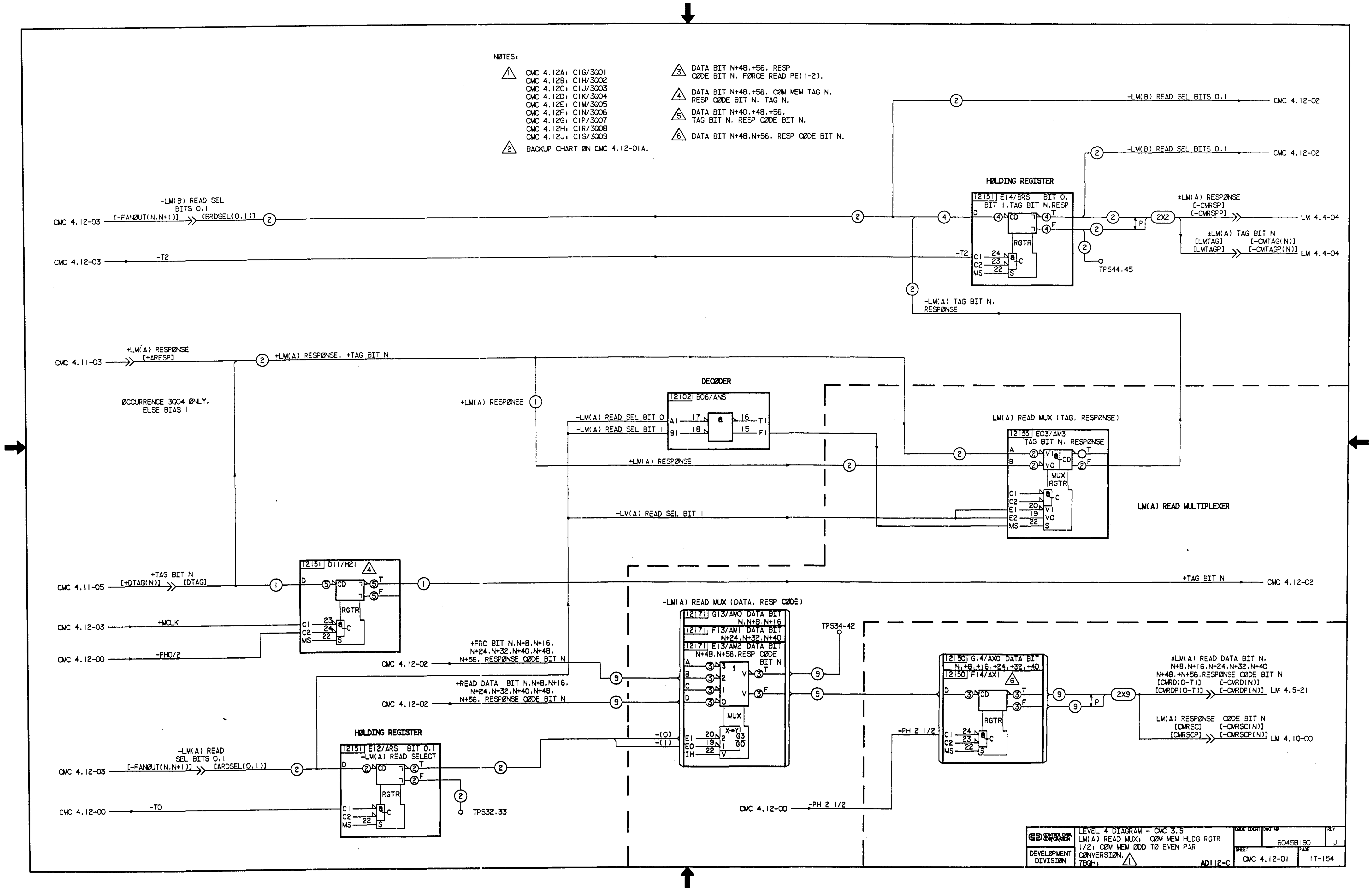
SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	24	IOU XMIT	1	T1	C2-18	
						2	T2	B3-17	
						3	F1	TERM	
						4	F2	TERM	
			A2	20	IOU XMIT	11	T3	B2-17	
						12	T4	D2-18	
						13	F3	TERM	
						14	F4	TERM	
			A3	19	IOU XMIT	18	T5	D3-18	
						17	T6	C3-18	
						16	F5	TERM	
						15	F6	TERM	
			A4	23		8	T7		
						7	T8		
						6	F7		
						5	F8		
A8-14		T	CX	22	SQ. WAVE GEN.				

NOTES: ⚠ REFER TO CMC 4.12-00.

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.12-00
7BQH: ⚠/⚠ AD112-C

CODE IDENT 34010
D
DWG NO 60458180
REV J
SHEET CMC 4.12-00A 17-153


HOLDING REGISTER
12151 E14/BRS BIT 0, BIT 1,TAG BIT N,RESP
CD
RGTR
-LM(B) READ SEL BITS 0,1
CMC 4.12-02
±LM(A) RESPONSE [-CMRSP] [-CMRSPP]
LM 4.4-04
±LM(A) TAG BIT N [LMTAG] [-CMTAG(N)] [LMTAGP] [-CMTAGP(N)]
2X2
TPS44,45
-LM(A) TAG BIT N, RESPONSE
CMC 4.12-03
-LM(B) READ SEL BITS 0,1 [-FANOUT(N,N+1)] [BRDSEL(0,1)]
-T2
CMC 4.11-03
+LM(A) RESPONSE [+ARESP]
+LM(A) RESPONSE, +TAG BIT N
OCCURRENCE 3Q04 ONLY, ELSE BIAS 1
+LM(A) RESPONSE
DECODER
12102 B06/ANS
-LM(A) READ SEL BIT 0
-LM(A) READ SEL BIT 1
LM(A) READ MUX (TAG, RESPONSE)
12135 E03/AM3 TAG BIT N, RESPONSE
MUX RGTR
LM(A) READ MULTIPLEXER
CMC 4.11-05
+TAG BIT N [+DTAG(N)] [DTAG]
12131 D11/H21
CMC 4.12-03 +MCLK
CMC 4.12-00 -PH0/2
+TAG BIT N
CMC 4.12-02
-LM(A) READ MUX (DATA, RESP CODE)
12171 G13/AM0 DATA BIT N,N+8,N+16
12171 F13/AM1 DATA BIT N+24,N+32,N+40
12171 E13/AM2 DATA BIT N+48,N+56,RESP CODE BIT N
TPS34-42
+FRC BIT N,N+8,N+16, N+24,N+32,N+40,N+48, N+56, RESPONSE CODE BIT N
+READ DATA BIT N,N+8,N+16, N+24,N+32,N+40,N+48, N+56, RESPONSE CODE BIT N
12150 G14/AX0 DATA BIT N,+8,+16,+24,+32,+40
12150 F14/AX1
-PH 2 1/2
2X9
±LM(A) READ DATA BIT N, N+8,N+16,N+24,N+32,N+40 N+48,+N+56,RESPONSE CODE BIT N [CMRD(0-7)] [-CMRD(N)] [CMRDP(0-7)] [-CMRDP(N)]
LM 4.5-21
LM(A) RESPONSE CODE BIT N [CMRSC] [-CMRSC(N)] [CMRSCP] [-CMRSCP(N)]
LM 4.10-00
HOLDING REGISTER
12131 E12/ARS BIT 0,1 -LM(A) READ SELECT
-LM(A) READ SEL BITS 0,1 [-FANOUT(N,N+1)] [ARDSEL(0,1)]
CMC 4.12-00 -T0
TPS32,33
CMC 4.12-00 -PH 2 1/2
-(0)
-(1)

NOTES:

⚠1 CMC 4.12A; C1G/3Q01
CMC 4.12B; C1H/3Q02
CMC 4.12C; C1J/3Q03
CMC 4.12D; C1K/3Q04
CMC 4.12E; C1M/3Q05
CMC 4.12F; C1N/3Q06
CMC 4.12G; C1P/3Q07
CMC 4.12H; C1R/3Q08
CMC 4.12J; C1S/3Q09

⚠2 BACKUP CHART ON CMC 4.12-01A.

⚠3 DATA BIT N+48,+56, RESP CODE BIT N, FORCE READ PE(1-2).

⚠4 DATA BIT N+48,+56, COM MEM TAG N, RESP CODE BIT N, TAG N.

⚠5 DATA BIT N+40,+48,+56, TAG BIT N, RESP CODE BIT N.

⚠6 DATA BIT N+48,N+56, RESP CODE BIT N.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM - CMC 3.9
LM(A) READ MUX; COM MEM HLDG RGTR
1/2; COM MEM ODD TO EVEN PAR
CONVERSION.
TBGH; ⚠1
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.12-01	17-154

12151 LOC: E14 NAME: BRS

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B6-19		T	D1	20	$P3_B$ RD SEL BIT 0	8	T1	E2-20	
						7	F1	TP-45	
F3-20		T	D2	19	$P3_B$ RD SEL BIT 1	12	T2	E2-19	
						11	F2	TP-44	
E3-6		T	D3	2	$P3_A$ TAG BIT N	3	T3	P2B-19	
						4	F3	P2B-20	
E3-14		T	D4	18	$P3_A$ RESPONSE	14	T4	P2B-13	
						13	F4	P2B-14	
			D5	1		6	T5		
						5	F5		
			D6	17		16	T6		
						15	F6		
D9-2		T	C1	24					
			C2	23					
			MS	22					

12151 LOC: D11 NAME: H21

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C10-16		T	D1	1	DATA BIT N+48	6	T1	E13-17	
						5	F1	TERM	
C10-12		T	D2	2	DATA BIT N+56	3	T2	E13-1	
						4	F2	TERM	
C10-4		T	D3	17	COM MEM TAG BIT N	16	T3	E3-3	
						15	F3	TERM	
C10-6		T	D4	18	RESP CODE BIT N	14	T4	E13-5	
						13	F4	TERM	
P1A-15	E3-04		D5	20	TAG BIT N	8	T5	F3-2	
						7	F5	TERM	
			D6	19		12	T6		
						11	F6		
D9-7	D10-23		C1	23					
D10-24		T	C2	24					
			MS	22					

12155 LOC: E03 NAME: AM3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D11-20		T	A1	4	$P3_A$ TAG BIT N	5	T1	TERM	
D11-16	F3-1		B1	3		6	F1	E14-2	
P1A-7	E3-15		A2	16	$P3_A$ RESPONSE	13	T2	TERM	
E3-16		T	B2	15		14	F2	E14-18	
			A3	2		8	T3		
			B3	1		7	F3		
			A4	18		12	T4		
			B4	17		11	F4		
			C1	24					
			C2	23					
B6-18	E3-19		E1	20					
E3-20	E12-19		E2	18					
B6-15		T	MS	22					

12151 LOC: E12 NAME: AR3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B6-17		T	D1	20	$P3_A$ RD SEL BIT 0	8	T1	E13-20	
						7	F1	TP-33	
E3-19		T	D2	19	$P3_A$ RD SEL BIT 1	12	T2	E13-19	
						11	F2	TP-32	
			D3	2		3	T3		
						4	F3		
			D4	1		6	T4		
						5	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
D8-1		T	C1	24					
			C2	23					
			MS	22					

12171 LOC: G13 NAME: AM0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	15	$P3_A$ DATA BIT N	14	T1	TP-35	
			B1	16		13	F1	G14-1	
D10-16	G2-17		C1	17					
P1B-17	G2-18		D1	18					
			A2	3	$P3_A$ DATA BIT N+8	7	T2	TP-36	
			B2	4		8	F2	G14-2	
D10-6	G2-1		C2	5					
P1B-19	G2-2		D2	6					
			A3	23	$P3_A$ DATA BIT N+16	11	T3	TP-41	
P1C-170	G2-4		B3	24		12	F3	G14-20	
D10-3	G2-5		C3	1					
P1B-21	G2-6		D3	2					
F13-20		T	E1	20					
F13-19		T	E0	19					
			IH	22					

12171 LOC: F13 NAME: AM1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	15	$P3_A$ DATA BIT N+24	14	T1	TP-34	
F2-16		T	B1	16		13	F1	G14-19	
D10-14	F2-17		C1	17					
P1B-23	F2-18		D1	18					
			A2	3	$P3_A$ DATA BIT N+32	7	T2	TP-37	
P1C-169	F2-24		B2	4		8	F2	G14-17	
D10-12	F2-1		C2	5					
P1B-18	F2-2		D2	6					
			A3	23	$P3_A$ DATA BIT N+40	11	T3	TP-38	
F2-04		T	B3	24		12	F3	G14-18	
D10-8	F2-5		C3	1					
P1B-20	F2-6		D3	2					
E13-20	G13-20		E1	20					
E13-19	G13-19		E0	19					
			IH	22					

12171 LOC: E13 NAME: AM2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	15	$P3_A$ DATA BIT N+48	14	T1	TP-42	
P1C-165	E2-4		B1	16		13	F1	F14-19	
D11-6	E2-5		C1	17					
P1B-22	C5-19		D1	18					
			A2	23	$P3_A$ DATA BIT N+56	11	T2	TP-40	
P1C-166	E2-24		B2	24		12	F2	F14-17	
D11-3	E2-1		C2	1					
P1B-24	C5-22		D2	2					
			A3	3	$P3_A$ RESP CODE BIT N	7	T3	TP-39	
E13-6		T	B3	4		8	F3	F14-18	
D11-14	E2-17		C3	5					
C5-17	E13-4		D3	6					
E12-8	F13-20		E1	20					
E12-12	F13-19		E0	19					
			IH	22					

12150 LOC: G14 NAME: AX0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G13-13		T	D1	1	$P3_A$ DATA BIT N	6	T1	P2B-39	
						5	F1	P2B-40	
G13-8		T	D2	2	$P3_A$ DATA BIT N+8	3	T2	P2B-37	
						4	F2	P2B-38	
G13-12		T	D3	20	$P3_A$ DATA BIT N+16	8	T3	P2B-33	
						7	F3	P2B-34	
F13-13		T	D4	19	$P3_A$ DATA BIT N+24	12	T4	P2B-31	
						11	F4	P2B-32	
F13-8		T	D5	17	$P3_A$ DATA BIT N+32	16	T5	P2B-29	
						15	F5	P2B-30	
F13-12		T	D6	18	$P3_A$ DATA BIT N+40	14	T6	P2B-27	
						13	F6	P2B-28	
F14-24		T	C1	24					
			C2	23					
			MS	22					

12150 LOC: F14 NAME: AX1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E13-13		T	D1	19	$P3_A$ DATA BIT N+48	12	T1	P2B-23	
						11	F1	P2B-24	
E13-12		T	D2	17	$P3_A$ DATA BIT N+56	16	T2	P2B-21	
						15	F2	P2B-22	
E13-8		T	D3	18	$P3_A$ RESP CODE BIT N	14	T3	P2B-17	
						13	F3	P2B-18	
			D4	2		3	T4		
						4	F4		
			D5	1		6	T5		
						5	F5		
			D6	20		8	T6		
						7	F6		
E9-7	G14-24		C1	24					
			C2	23					
			MS	22					

NOTES:

△1 CMC 4.12A; C1G/3Q01
4.12B; C1H/3Q02
4.12C; C1J/3Q03
4.12D; C1K/3Q04
4.12E; C1M/3Q05
4.12F; C1N/3Q06
4.12G; C1P/3Q07
4.12H; C1R/3Q08
4.12J; C1S/3Q09

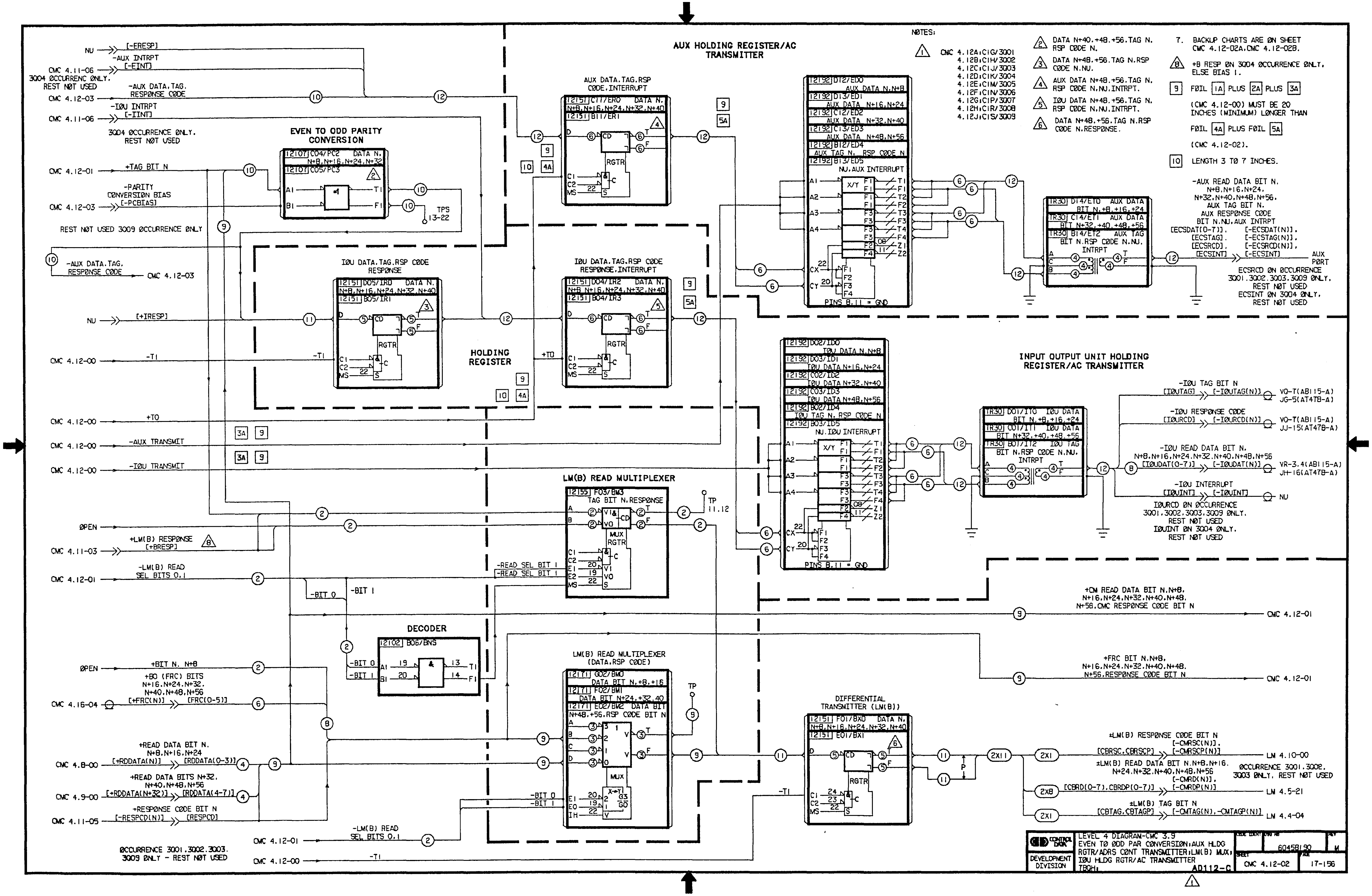
LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.12-01

7BQH; △1

AD112-C

DWG NO	REV
60458190	J

SHEET	
CMC 4.12-01A	17-155


AUX HOLDING REGISTER/AC TRANSMITTER
EVEN TO ODD PARITY CONVERSION
HOLDING REGISTER
IØU DATA.TAG.RSP CØDE RESPØNSE
IØU DATA.TAG.RSP CØDE RESPØNSE.INTERRUPT
AUX DATA.TAG.RSP CØDE.INTERRUPT
INPUT OUTPUT UNIT HOLDING REGISTER/AC TRANSMITTER
LM(B) READ MULTIPLEXER
DECODER
LM(B) READ MULTIPLEXER (DATA.RSP CØDE)
DIFFERENTIAL TRANSMITTER (LM(B))
NU
[-ERESP]
-AUX INTRPT
[-EINT]
CMC 4.11-06
3004 ØCCURRENC ØNLY. REST NØT USED
-AUX DATA.TAG. RESPØNSE CØDE
CMC 4.12-03
-IØU INTRPT
[-IINT]
3004 ØCCURRENCE ØNLY. REST NØT USED
CMC 4.12-01
+TAG BIT N
-PARITY CØNVERSIØN BIAS
[-PCBIAS]
REST NØT USED 3009 ØCCURRENCE ØNLY
TPS 13-22
-AUX DATA.TAG. RESPØNSE CØDE
[+IRESP]
CMC 4.12-00
-T1
+T0
-AUX TRANSMIT
-IØU TRANSMIT
ØPEN
+LM(B) RESPØNSE
[+BRESP]
CMC 4.11-03
-LM(B) READ SEL BITS 0.1
-BIT 0
-BIT 1
+BIT N. N+8
+B0 (FRC) BITS N+16.N+24.N+32. N+40.N+48.N+56
CMC 4.16-04
[+FRC(N)]
[FRC(0-5)]
+READ DATA BIT N. N+8.N+16.N+24
CMC 4.8-00
[+RDDATA(N)]
[RDDATA(0-3)]
+READ DATA BITS N+32. N+40.N+48.N+56
CMC 4.9-00
[+RDDATA(N+32)]
[RDDATA(4-7)]
+RESPØNSE CØDE BIT N
CMC 4.11-05
[-RESPCD(N)]
[RESPCD]
ØCCURRENCE 3001.3002.3003. 3009 ØNLY - REST NØT USED
-LM(B) READ SEL BITS 0.1
12107 C04/PC2 DATA N. N+8.N+16.N+24.N+32
12107 C05/PC3
12151 D05/1R0 DATA N. N+8.N+16.N+24.N+32.N+40
12151 B05/1R1
12151 D04/1R2 DATA N. N+8.N+16.N+24.N+32.N+40
12151 B04/1R3
12151 C17/ER0 DATA N. N+8.N+16.N+24.N+32.N+40
12151 B17/ER1
RGTR
12192 D12/ED0 AUX DATA N.N+8
12192 D13/ED1 AUX DATA N+16.N+24
12192 C12/ED2 AUX DATA N+32.N+40
12192 C13/ED3 AUX DATA N+48.N+56
12192 B12/ED4 AUX TAG N. RSP CØDE N
12192 B13/ED5 NU.AUX INTERRUPT
PINS 8.11 = GND
TR30 D14/ET0 AUX DATA BIT N.+8.+16.+24
TR30 C14/ET1 AUX DATA BIT N+32.+40.+48.+56
TR30 B14/ET2 AUX TAG BIT N.RSP CØDE N.NU. INTRPT
-AUX READ DATA BIT N. N+8.N+16.N+24. N+32.N+40.N+48.N+56. AUX TAG BIT N. AUX RESPØNSE CØDE BIT N.NU.AUX INTRPT
[ECSDAT(0-7)]. [ECSTAG]. [ECSRCD]. [ECSINT]
[-ECSDAT(N)]. [-ECSTAG(N)]. [-ECSRCD(N)]. [-ECSINT]
AUX PØRT
ECSRCD ØN ØCCURRENCE 3001.3002.3003.3009 ØNLY. REST NØT USED
ECSINT ØN 3004 ØNLY. REST NØT USED
12192 D02/ID0 IØU DATA N.N+8
12192 D03/ID1 IØU DATA N+16.N+24
12192 C02/ID2 IØU DATA N+32.N+40
12192 C03/ID3 IØU DATA N+48.N+56
12192 B02/ID4 IØU TAG N. RSP CØDE N
12192 B03/ID5 NU.IØU INTERRUPT
PINS 8.11 = GND
TR30 D01/IT0 IØU DATA BIT N.+8.+16.+24
TR30 C01/IT1 IØU DATA BIT N+32.+40.+48.+56
TR30 B01/IT2 IØU TAG BIT N.RSP CØDE N.NU. INTRPT
-IØU TAG BIT N
[IØUTAG]
[-IØUTAG(N)]
VO-T(AB115-A) JG-5(AT47B-A)
-IØU RESPØNSE CØDE
[IØURCD]
[-IØURCD(N)]
VO-T(AB115-A) JJ-15(AT47B-A)
-IØU READ DATA BIT N. N+8.N+16.N+24.N+32.N+40.N+48.N+56
[IØUDAT(0-7)]
[-IØUDAT(N)]
VR-3.4(AB115-A) JH-16(AT47B-A)
-IØU INTERRUPT
[IØUINT]
[-IØUINT]
NU
IØURCD ØN ØCCURRENCE 3001.3002.3003.3009 ØNLY. REST NØT USED
IØUINT ØN 3004 ØNLY. REST NØT USED
12155 F03/BM3 TAG BIT N.RESPØNSE
MUX RGTR
TP 11.12
-READ SEL BIT 1
-READ SEL BIT 1
12102 B06/BNS
+CM READ DATA BIT N.N+8. N+16.N+24.N+32.N+40.N+48. N+56.CMC RESPØNSE CØDE BIT N
CMC 4.12-01
+FRC BIT N.N+8. N+16.N+24.N+32.N+40.N+48. N+56.RESPØNSE CØDE BIT N
CMC 4.12-01
12171 G02/BM0 DATA BIT N.+8.+16
12171 F02/BM1 DATA BIT N+24.+32.40
12171 E02/BM2 DATA BIT N+48.+56.RSP CØDE BIT N
MUX
TP
-BIT 0
-BIT 1
12151 F01/BX0 DATA N. N+8.N+16.N+24.N+32.N+40
12151 E01/BX1
±LM(B) RESPØNSE CØDE BIT N
[CBRSC.CBRSCP]
[-CMRSC(N)]. [-CMRSCP(N)]
LM 4.10-00
±LM(B) READ DATA BIT N.N+8.N+16. N+24.N+32.N+40.N+48.N+56
[CBRD(0-7).CBRDP(0-7)]
[-CMRD(N)]. [-CMRDP(N)]
ØCCURRENCE 3001.3002. 3003 ØNLY. REST NØT USED
LM 4.5-21
±LM(B) TAG BIT N
[CBTAG.CBTAGP]
[-CMTAG(N).-CMTAGP(N)]
LM 4.4-04
2X11
2X1
2X8
2X1
CMC 4.12-01
CMC 4.12-00

NØTES:

1. CMC 4.12A:C1G/3001
4.12B:C1H/3002
4.12C:C1J/3003
4.12D:C1K/3004
4.12E:C1M/3005
4.12F:C1N/3006
4.12G:C1P/3007
4.12H:C1R/3008
4.12J:C1S/3009

2. DATA N+40.+48.+56.TAG N. RSP CØDE N.

3. DATA N+48.+56.TAG N.RSP CØDE N.NU.

4. AUX DATA N+48.+56.TAG N. RSP CØDE N.NU.INTRPT.

5. IØU DATA N+48.+56.TAG N. RSP CØDE N.NU.INTRPT.

6. DATA N+48.+56.TAG N.RSP CØDE N.RESPØNSE.

7. BACKUP CHARTS ARE ØN SHEET CMC 4.12-02A.CMC 4.12-02B.

8. +B RESP ØN 3004 ØCCURRENCE ØNLY. ELSE BIAS 1.

9. FØIL 1A PLUS 2A PLUS 3A (CMC 4.12-00) MUST BE 20 INCHES (MINIMUM) LØNGER THAN FØIL 4A PLUS FØIL 5A (CMC 4.12-02).

10. LENGTH 3 TØ 7 INCHES.

CONTROL DATA
DEVELOPMENT DIVISION
LEVEL 4 DIAGRAM-CMC 3.9
EVEN TØ ØDD PAR CØNVERSIØN;AUX HLDG RGTR/ADRS CØNT TRANSMITTER;LM(B) MUX;
IØU HLDG RGTR/AC TRANSMITTER
TBQH;
AD112-C
CODE IDENT
DWG NO 60458190
REV M
SHEET CMC 4.12-02
PAGE 17-156

12107 LOC: C04 NAME: PC2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G2-18		T	A1	2	DATA	5	T1	D5-19	
C4-18	C4-24		B1	3	BIT N	4	F1	TP-17	
G2-2		T	A2	1	DATA	7	T2	D5-2	
C4-3	C4-23		B2	24	BIT N+8	6	F2	TP-16	
G2-6		T	A3	17	DATA	15	T3	D5-1	
C5-18	C4-3		B3	18	BIT N+16	16	F3	TP-15	
F2-18		T	A4	19	DATA	13	T4	D5-20	
C4-23		T	B4	20	BIT N+24	14	F4	TP-14	
F2-2		T	A5	22	DATA	11	T5	D5-18	
C4-24	C4-20		B5	23	BIT N+32	12	F5	TP-13	
						8	EQ		

12107 LOC: C05 NAME: PC3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F2-6		T	A1	2	DATA	5	T1	D5-17	
C5-24	C5-18		B1	3	BIT N+40	4	F1	TP-19	
E13-18	E2-06		A2	19	DATA	13	T2	B5-19	
P1A-02	C5-23		B2	20	BIT N+48	14	F2	TP-21	
E13-2	E2-2		A3	22	DATA	11	T3	B5-20	
C5-20	C5-24		B3	23	BIT N+56	12	F3	TP-20	
F3-2		T	A4	1	TAG	7	T4	B5-17	
C5-23	C5-3		B4	24	BIT N	6	F4	TP-18	
E2-18	E13-6		A5	17	RESPONSE	15	T5	B5-18	
C5-3	C4-18		B5	18	N	16	F5	TP-22	
						8	EQ		

12151 LOC: C11 NAME: ER0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A5-12		T	D1	17	AUX DATA	16	T1	D12-22	
					BIT N	15	F1	TERM	
A5-3		T	D2	18	AUX DATA	14	T2	D12-20	
					BIT N+8	13	F2	TERM	
A5-6		T	D3	1	AUX DATA	6	T3	D13-22	
					BIT N+16	5	F3	TERM	
A5-8		T	D4	2	AUX DATA	3	T4	D13-20	
					BIT N+24	4	F4	TERM	
A5-14		T	D5	20	AUX DATA	8	T5	C12-22	
					BIT N+32	7	F5	TERM	
A5-16		T	D6	19	AUX DATA	12	T6	C12-20	
					BIT N+40	11	F6	TERM	
D8-7	B11-24		C1	24					
			C2	23					
			MS	22					

12151 LOC: B11 NAME: ER1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A6-12		T	D1	1	AUX DATA	6	T1	C13-22	
					BIT N+48	5	F1	TERM	
A6-8		T	D2	2	AUX DATA	3	T2	C13-20	
					BIT N+56	4	F2	TERM	
A6-16		T	D3	19	AUX TAG	12	T3	B12-22	
					BIT N	11	F3	TERM	
A6-14		T	D4	18	AUX RESP	14	T4	B12-20	
					CODE BIT N	13	F4	TERM	
P1A-09		T	D5	20	NU	8	T5	B13-22	
						7	F5	TERM	
P1A-03		T	D6	17	AUX	16	T6	B13-20	
					INTRPT	15	F6	TERM	
C11-24		T	C1	24					
			C2	23					
			MS	22					

12192 LOC: D12 NAME: ED0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D12-17	D12-2		A1	1	AUX	7	T1	D12-5	
					BIT N	6	F1	D12-4	
D12-1		T	A2	2		5	T2	D14-6	
					BIT N	4	F2	D14-4	
A12-17	D12-17		A3	18	AUX	12	T3	D12-14	
					BIT N+8	13	F3	D12-15	
D12-18	D12-1		A4	17		14	T4	D14-1	
					BIT N+8	15	F4	D14-3	
						8	Z1		
						11	Z2		
C11-16		T	CX	22					
C11-14		T	CY	20					

12192 LOC: D13 NAME: ED1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D13-17	D13-2		A1	1	AUX	7	T1	D13-5	
					BIT N+16	6	F1	D14-16	
D13-1		T	A2	2		5	T2	D14-18	
					BIT N+16	4	F2	D13-6	
A12-18	D13-17		A3	18	AUX	12	T3	D13-14	
					BIT N+24	13	F3	D13-15	
D13-18	D13-1		A4	17		14	T4	D14-13	
					BIT N+24	15	F4	D14-15	
						8	Z1		
						11	Z2		
C11-6		T	CX	22					
C11-3		T	CY	20					

12192 LOC: C12 NAME: ED2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C12-17	C12-2		A1	1	AUX	7	T1	C12-5	
					BIT N+32	6	F1	C12-4	
C12-1		T	A2	2		5	T2	C14-6	
					BIT N+32	4	F2	C14-4	
A12-1	C12-17		A3	18	AUX	12	T3	C12-14	
					BIT N+40	13	F3	C12-15	
C12-18	C12-1		A4	17		14	T4	C14-13	
					BIT N+40	15	F4	C14-15	
						8	Z1		
						11	Z2		
C11-8		T	CX	22					
C11-12		T	CY	20					

12192 LOC: C13 NAME: ED3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-18	C13-2		A1	1	AUX	7	T1	C13-5	
					BIT N+48	6	F1	C13-4	
C13-1		T	A2	2		5	T2	C14-1	
					BIT N+48	4	F2	C14-3	
C13-17	C13-1		A3	18	AUX	12	T3	C13-14	
					BIT N+56	13	F3	C13-15	
A12-12	C13-18		A4	17		14	T4	C14-18	
					BIT N+56	15	F4	C14-16	
						8	Z1		
						11	Z2		
B11-6		T	CX	22					
B11-3		T	CY	20					

12192 LOC: B12 NAME: ED4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B12-18	B12-2		A1	1	AUX	7	T1	B12-5	
					TAG N	6	F1	B12-4	
B12-2		T	A2	2		5	T2	B14-1	
					TAG N	4	F2	B14-3	
B12-17	B12-1		A3	18	AUX	12	T3	B12-14	
					RESP CD N	13	F3	B12-15	
A12-2	B12-18		A4	17		14	T4	B14-18	
					RESP CD N	15	F4	B14-16	
						8	Z1		
						11	Z2		
B11-12		T	CX	22					
B11-14		T	CY	20					

12192 LOC: B13 NAME: ED5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B13-17	B13-2		A1	1	NU	7	T1	B13-5	
						6	F1	B13-4	
B13-1		T	A2	2	NU	5	T2	B14-6	
						4	F2	B14-4	
A12-11	B13-17		A3	18	AUX	12	T3	B13-14	
					INTRPT	13	F3	B14-15	
B13-18	B13-1		A4	17		14	T4	B14-13	
					INTRPT	15	F4	B13-13	
						8	Z1		
						11	Z2		
B11-8		T	CX	22					
B11-16		T	CY	20					

TR30 LOC: D14 NAME: ET0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D12-5			A1	6	AUX	7	T1	P2B-11	
GND			C1	5	BIT N	8	F1	GND	
D12-4			B1	4					
D12-14			A2	1	AUX	24	T2	P2B-10	
GND			C2	2	BIT N+8	23	F2	GND	
D12-15			B2	3					
D13-5			A3	18	AUX	19	T3	P2B-07	
GND			C3	17	BIT N+16	20	F3	GND	
D13-6			B3	16					
D13-14			A4	13	AUX	12	T4	P2B-06	
GND			C4	14	BIT N+24	11	F4	GND	
D13-15			B4	15					

TR30 LOC: C14 NAME: ET1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C12-5			A1	6	AUX	7	T1	P2B-03	
GND			C1	5	BIT N+32	8	F1	GND	
C12-4			B1	4					
C12-14			A2	13	AUX	12	T2	P2B-02	
GND			C2	14	BIT N+40	11	F2	GND	
C12-15			B2	15					
C13-5			A3	1	AUX	24	T3	P1B-39	
GND			C3	2	BIT N+48	23	F3	GND	
C13-4			B3	3					
C13-14			A4	18	AUX	19	T4	P1B-38	
GND			C4	17	BIT N+56	20	F4	GND	
C13-15			B4	16					

TR30 LOC: B14 NAME: ET2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B12-5			A1	1	AUX	24	T1	P1B-35	
GND			C1	2	TAG	23	F1	GND	
B12-4			B1	3	BIT N				
B12-14			A2	18	AUX	19	T2	P1B-34	
GND			C2	17	RESP CD	20	F2	GND	
B12-15			B2	16	BIT N				
B13-7			A3	6	NU	7	T3	P1B-31	
GND			C3	5		8	F3	GND	
B13-4			B3	4					
B13-14			A4	13	AUX	12	T4	P1B-30	
GND			C4	14	INTRPT	11	F4	GND	
B13-13			B4	15					

12151 LOC: D05 NAME: IR0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C4-5	A05-19		D1	19	DATA	12	T1	D4-17	
					BIT N	11	F1	TERM	
C4-7	A05-2		D2	2	DATA	3	T2	D4-18	
					BIT N+8	4	F2	TERM	
C4-15	A05-1		D3	1	DATA	6	T3	D4-20	
					BIT N+16	5	F3	TERM	
C4-13	A05-20		D4	20	DATA	8	T4	D4-19	
					BIT N+24	7	F4	TERM	
C4-11	A05-18		D5	18	DATA	14	T5	D4-1	
					BIT N+32	13	F5	TERM	
C5-5	A05-17		D6	17	DATA	16	T6	D4-2	
					BIT N+40	15	F6	TERM	
D8-13	B5-24		C1	24					
			C2	23					
			MS	22					

12151 LOC: B05 NAME: IR1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C5-13	A06-19		D1	19	DATA	12	T1	B4-20	
					BIT N+48	11	F1	TERM	
C5-11	A06-20		D2	20	DATA	8	T2	B4-19	
					BIT N+56	7	F2	TERM	
C5-7	A06-17		D3	17	TAG	16	T3	B4-17	
					BIT N	15	F3	TERM	
C5-15	A06-18		D4	18	RESP CODE	14	T4	B4-18	
					BIT N	13	F4	TERM	
P1A-10		T	D5	1	NU	6	T5	B4-1	
						5	F5	TERM	
			D6	2		3	T6		
						4	F6		
D5-24		T	C1	24					
			C2	23					
			MS	22					

12151 LOC: D04 NAME: IR2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D5-12		T	D1	17	IOU DATA	16	T1	D2-22	
					BIT N	15	F1	TERM	
D5-3		T	D2	18	IOU DATA	14	T2	D2-20	
					BIT N+8	13	F2	TERM	
D5-6		T	D3	20	IOU DATA	8	T3	D3-22	
					BIT N+16	7	F3	TERM	
D5-8		T	D4	19	IOU DATA	12	T4	D3-20	
					BIT N+24	11	F4	TERM	
D5-14		T	D5	1	IOU DATA	6	T5	C2-22	
					BIT N+32	5	F5	TERM	
D5-16		T	D6	2	IOU DATA	3	T6	C2-20	
					BIT N+40	4	F6	TERM	
B4-24		T	C1	24					
			C2	23					
			MS	22					

12151 LOC: B04 NAME: IR3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B5-12		T	D1	20	IOU DATA	8	T1	C3-22	
					BIT N+48	7	F1	TERM	
B5-8		T	D2	19	IOU DATA	12	T2	C3-20	
					BIT N+56	11	F2	TERM	
B5-16		T	D3	17	IOU TAG	16	T3	B2-22	
					BIT N	15	F3	TERM	
B5-14		T	D4	18	IOU RESP CODE	14	T4	B2-20	
					BIT N	13	F4	TERM	
B5-6		T	D5	1	NU	6	T5	B3-22	
						5	F5	TERM	
P1A-04		T	D6	2	IOU	3	T6	B3-20	
					INTRPT	4	F6	TERM	
D8-8	D4-24		C1	24					
			C2	23					
			MS	22					

12155 LOC: F03 NAME: BM3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D11-08	C5-1		A1	2	$P3_B$	8	T1	TP-11	
E3-3		T	B1	1	TAG BIT N	7	F1	E1-20	
P1A-08	F3-3		A2	4	$P3_B$	5	T2	TP-12	
F3-4		T	B2	3	RESPONSE	6	F2	E1-18	
			A3	16		13	T3		
			B3	15		14	F3		
			A4	18		12	T4		
			B4	17		11	F4		
			C1	24					
			C2	23					
F3-19	E14-19		E1	20					
B6-20	F3-20		E2	19					
B6-14		T	MS	22					

NOTES: ⚠ REFER TO CMC 4.12-00

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.12-02
78QH; ⚠/⚠ AD112-C

CODE IDENT 34010 D
DWG NO 60458190
REV J
SHEET CMC 4.12-02A 17-157

12192 LOC: D02 NAME: ID0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D2-17	D2-2		A1	1	IOU	7	T1	D1-1	
					BIT N	6	F1	D2-4	
D2-1		T	A2	2		5	T2	D2-7	
					BIT N	4	F2	D1-3	
A3-12	D2-17		A3	18	IOU	12	T3	D2-14	
					BIT N+8	13	F3	D2-15	
D2-18	D2-1		A4	17		14	T4	D1-6	
					BIT N+8	15	F4	D1-4	
						8	Z1		
						11	Z2		
D4-16		T	CX	22					
D4-14		T	CY	20					

12192 LOC: D03 NAME: ID1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D3-17	D3-2		A1	1	IOU	7	T1	D1-13	
					BIT N+16	6	F1	D1-15	
D3-1		T	A2	2		5	T2	D3-7	
					BIT N+16	4	F2	D3-6	
A3-18	D3-17		A3	18	IOU	12	T3	D3-14	
					BIT N+24	13	F3	D1-16	
D3-18	D3-1		A4	17		14	T4	D1-18	
					BIT N+24	15	F4	D3-13	
						8	Z1		
						11	Z2		
D4-8		T	CX	22					
D4-12		T	CY	20					

12192 LOC: C02 NAME: ID2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C2-17	C2-2		A1	1	IOU	7	T1	C1-1	
					BIT N+32	6	F1	C2-4	
C2-1		T	A2	2		5	T2	C2-7	
					BIT N+32	4	F2	C1-3	
A3-1	C2-17		A3	18	IOU	12	T3	C1-6	
					BIT N+40	13	F3	C1-4	
C2-18	C2-1		A4	17		14	T4	C2-12	
					BIT N+40	15	F4	C2-13	
						8	Z1		
						11	Z2		
D4-6		T	CX	22					
D4-3		T	CY	20					

12192 LOC: C03 NAME: ID3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C3-17	C3-2		A1	1	IOU	7	T1	C1-13	
					BIT N+48	6	F1	C1-15	
C3-1		T	A2	2		5	T2	C3-7	
					BIT N+48	4	F2	C3-06	
A3-17	C3-17		A3	18	IOU	12	T3	C1-18	
					BIT N+56	13	F3	C1-16	
C3-18	C3-1		A4	17		14	T4	C3-12	
					BIT N+56	15	F4	C3-13	
						8	Z1		
						11	Z2		
B4-8		T	CX	22					
B4-12		T	CY	20					

12192 LOC: B02 NAME: ID4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B2-18	B2-2		A1	1	IOU	7	T1	B1-1	
					TAG N	6	F1	B1-3	
B2-1		T	A2	2		5	T2	B2-7	
					TAG N	4	F2	B2-6	
B2-17	B2-1		A3	18	IOU	12	T3	B1-18	
					RESP CD N	13	F3	B1-16	
A3-11	B2-18		A4	17		14	T4	B2-12	
					RESP CD N	15	F4	B2-13	
						8	Z1		
						11	Z2		
B4-16		T	CX	22					
B4-14		T	CY	20					

12192 LOC: B03 NAME: ID5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B3-18	B3-2		A1	1	NU	7	T1	B1-13	
						6	F1	B1-15	
B3-1		T	A2	2	NU	5	T2	B3-7	
						4	F2	B3-6	
B3-17	B3-1		A3	18	IOU	12	T3	B3-14	
					INTRPT	13	F3	B1-4	
A3-2	B3-18		A4	17		14	T4	B1-6	
					INTRPT	15	F4	B3-13	
						8	Z1		
						11	Z2		
B4-6		T	CX	22					
B4-3		T	CY	20					

TR30 LOC: D01 NAME: IT0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D2-7			A1	1	IOU	24	T1	P2A-11	
GND			C1	2	BIT N	23	F1	GND	
D2-4			B1	3					
D2-14			A2	6	IOU	7	T2	P2A-10	
GND			C2	5	BIT N+8	8	F2	GND	
D2-15			B2	4					
D3-7			A3	13	IOU	12	T3	P2A-07	
GND			C3	14	BIT N+16	11	F3	GND	
D3-6			B3	15					
D3-14			A4	18	IOU	19	T4	P2A-06	
GND			C4	17	BIT N+24	20	F4	GND	
D3-13			B4	16					

TR30 LOC: C01 NAME: IT1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C2-7			A1	1	IOU	24	T1	P2A-03	
GND			C1	2	BIT N+32	23	F1	GND	
C2-14			B1	3					
C2-12			A2	6	IOU	7	T2	P2A-02	
GND			C2	5	BIT N+40	8	F2	GND	
C2-13			B2	4					
C3-7			A3	13	IOU	12	T3	P1A-39	
GND			C3	14	BIT N+48	11	F3	GND	
C3-6			B3	15					
C3-12			A4	18	IOU	19	T4	P1A-38	
GND			C4	17	BIT N+56	20	F4	GND	
C3-15			B4	16					

TR30 LOC: B01 NAME: IT2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B2-7			A1	1	IOU	24	T1	P1A-35	
GND			C1	2	TAG	23	F1	GND	
B2-6			B1	3	BIT N				
B2-12			A2	18	IOU	19	T2	P1A-34	
GND			C2	17	RESP CD	20	F2	GND	
B2-13			B2	16	BIT N				
B3-7			A3	13		12	T3	P1A-31	
GND			C3	14	NU	11	F3	GND	
B3-6			B3	15					
B3-14			A4	6	IOU	7	T4	P1A-30	
GND			C4	5	INTRPT	8	F4	GND	
B3-13			B4	4					

12171 LOC: G02 NAME: BM0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	15	$P3_B$ DATA BIT N	14	T1	TP-04	
			B1	16		13	F1	F1-2	
G13-17		T	C1	17					
G13-18	C4-2		D1	18					
			A2	23	$P3_B$ DATA BIT N+8	11	T2	TP-10	
			B2	24		12	F2	F1-1	
G13-5		T	C2	1					
G13-6	C4-1		D2	2					
			A3	3	$P3_B$ DATA BIT N+16	7	T3	TP-09	
G13-24		T	B3	4		8	F3	F1-20	
G13-1		T	C3	5					
G13-2	C4-17		D3	6					
F2-20		T	E1	20					
F2-19		T	E0	19					
			IH	22					

12171 LOC: F02 NAME: BM1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	15	$P3_B$ DATA BIT N+24	14	T1	TP-02	
P1C-19	F13-16		B1	16		13	F1	F1-19	
F13-17		T	C1	17					
F13-18	C4-19		D1	18					
			A2	23	$P3_B$ DATA BIT N+32	11	T2	TP-06	
F13-4		T	B2	24		12	F2	F1-17	
F13-5		T	C2	1					
F13-6	C4-22		D2	2					
			A3	3	$P3_B$ DATA BIT N+40	7	T3	TP-05	
P1C-20	F13-24		B3	4		8	F3	F1-18	
F13-1		T	C3	5					
F13-2	C5-2		D3	6					
E2-20	G2-20		E1	20					
E2-19	G2-19		E0	19					
			IH	22					

12171 LOC: E02 NAME: BM2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	$P3_B$ DATA BIT N+48	7	T1	TP-07	
E13-16		T	B1	4		8	F1	E1-2	
E13-17		T	C1	5					
C5-19		T	D1	6					
			A2	23	$P3_B$ DATA BIT N+56	11	T2	TP-08	
E13-24		T	B2	24		12	F2	E1-1	
E13-1		T	C2	1					
C5-22		T	D2	2					
			A3	15	$P3_B$ RESP CODE BIT N	14	T3	TP-03	
P1A-26	E2-16		B3	16		13	F3	E1-19	
E13-5		T	C3	17					
E2-16	C5-17		D3	18					
E14-8	F2-20		E1	20					
E14-12	F2-19		E0	19					
			IH	22					

12151 LOC: F01 NAME: BX0

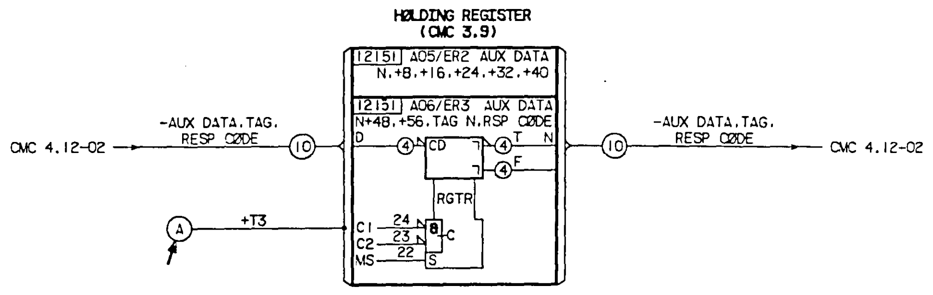
SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G2-13		T	D1	2	$P3_B$ DATA	3	T1	P2A-39	
					BIT N	4	F1	P2A-40	
G2-12		T	D2	1	$P3_B$ DATA	6	T2	P2A-37	
					BIT N+8	5	F2	P2A-38	
G2-8		T	D3	20	$P3_B$ DATA	8	T3	P2A-33	
					BIT N+16	7	F3	P2A-34	
F2-13		T	D4	19	$P3_B$ DATA	12	T4	P2A-31	
					BIT N+24	11	F4	P2A-32	
F2-12		T	D5	17	$P3_B$ DATA	16	T5	P2A-29	
					BIT N+32	15	F5	P2A-30	
F2-8		T	D6	18	$P3_B$ DATA	14	T6	P2A-27	
					BIT N+40	13	F6	P2A-28	
E1-24		T	C1	24					
			C2	23					
			MS	22					

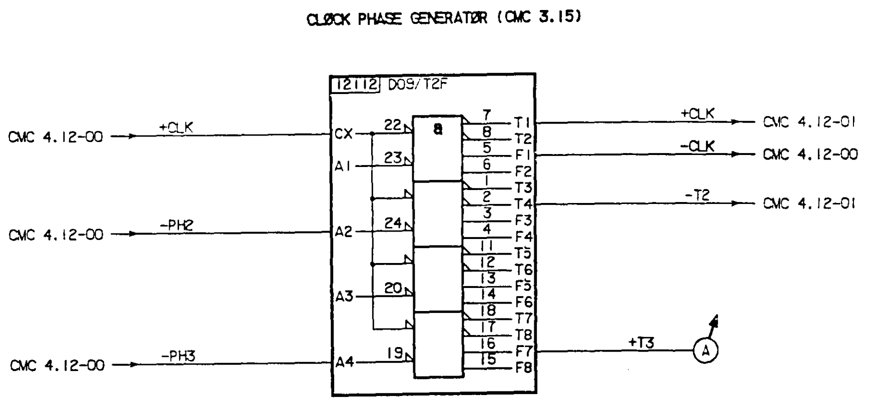
12151 LOC: E01 NAME: BX1

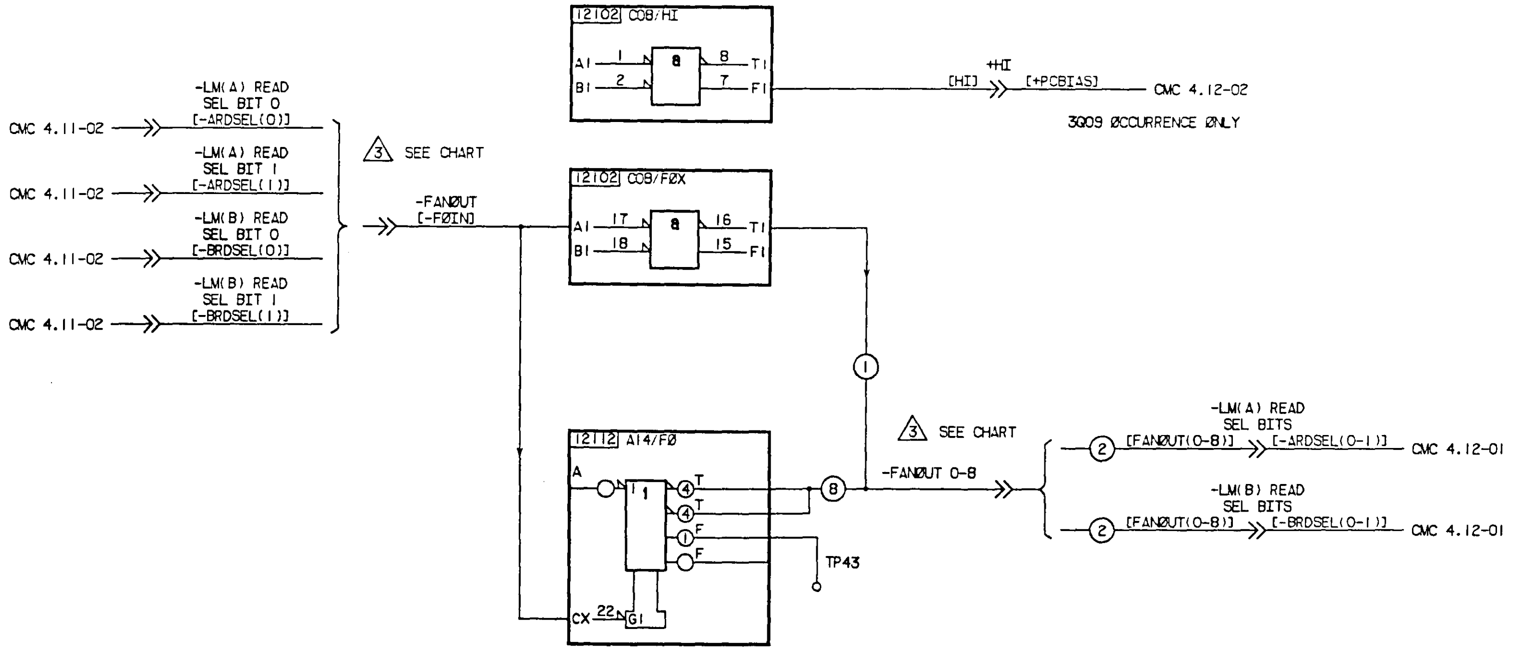
SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E2-8		T	D1	2	$P3_B$ DATA	3	T1	P2A-23	
					BIT N+48	4	F1	P2A-24	
E2-12		T	D2	1	$P3_B$ DATA	6	T2	P2A-21	
					BIT N+56	5	F2	P2A-22	
F3-7		T	D3	20	$P3_B$ TAG	8	T3	P2A-18	
					BIT N	7	F3	P2A-20	
E2-13		T	D4	19	$P3_B$ RESP	12	T4	P2A-17	
					CODE BIT N	11	F4	P2A-18	
F3-6		T	D5	18	$P3_B$	14	T5	P2A-13	
					RESPONSE	13	F5	P2A-14	
			D6	17		16	T6		
						15	F6		
D8-14	F1-24		C1	24					
			C2	23					
			MS	22					

NOTES: ⚠1 REFER TO CMC 4.12-00

CONTROL DATA CORPORATION ARDEN HILLS OPERATIONS	LEVEL 4 BACKUP CHART SUPPLEMENTAL WIRING INFORMATION CMC 4.12-02 78QH; ⚠/⚠ AD112-C	CODE IDENT 34010	D	DWG NO 60458190
				REV J
				SHEET CMC 4.12-02B 17-158


HØLDING REGISTER (CMC 3.9)


CLØCK PHASE GENERATØR (CMC 3.15)



NØTES:

△1 CMC 4.12A:C1G/3Q01
4.12B:C1H/3Q02
4.12C:C1J/3Q03
4.12D:C1K/3Q04
4.12E:C1M/3Q05
4.12F:C1N/3Q06
4.12G:C1P/3Q07
4.12H:C1R/3Q08
4.12J:C1S/3Q09

△2 MARK BIT N.TAG BIT N.FCTN BIT N ØR RESYNC REQ.

△3 FANIN CHART

SIGNAL	FANNED IN ØN PAK	
ARDSEL(0)	3Q02	EACH FANNED ØUT TØ ALL TBQH PAKS
ARDSEL(1)	3Q03	
BRDSEL(0)	3Q04	
BRDSEL(1)	3Q05	
BIAS LØW	3Q06-3Q09	

4. BACKUP CHARTS ØN CMC 4.12-03A. 4.12-03B.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.9.3.15 CØM MEM RGTR/ADRS CØNTRØL TRANSMITTER, CLØCK PHASE GENERATØR	CODE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	TBQH, △1 AD112-C	SHEET CMC 4.12-03	PAGE 17-159	

12151 LOC: A05 NAME: ER2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D5-19		T	D1	19	AUX DATA BIT N	12	T1	C11-17	
						11	F1	TERM	
D5-2		T	D2	2	AUX DATA BIT N+8	3	T2	C11-18	
						4	F2	TERM	
D5-1		T	D3	1	AUX DATA BIT N+16	6	T3	C11-1	
						5	F3	TERM	
D5-20		T	D4	20	AUX DATA BIT N+24	8	T4	C11-2	
						7	F4	TERM	
D5-18		T	D5	18	AUX DATA BIT N+32	14	T5	C11-20	
						13	F5	TERM	
D5-17		T	D6	17	AUX DATA BIT N+40	16	T6	C11-19	
						15	F6	TERM	
A06-24		T	C1	24					
			C2	23					
			MS	22					

12151 LOC: A06 NAME: ER3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B5-19		T	D1	19	AUX DATA BIT N+48	12	T1	B11-1	
						11	F1	TERM	
B5-20		T	D2	20	AUX DATA BIT N+56	8	T2	B11-2	
						7	F2	TERM	
B5-17		T	D3	17	AUX TAG BIT N	16	T3	B11-19	
						15	F3	TERM	
B5-18		T	D4	18	AUX RESP CODE BIT N	14	T4	B11-18	
						13	F4	TERM	
			D5	1		6	T5		
						5	F5		
			D6	2		3	T6		
						4	F6		
D09-16	A05-24		C1	24					
			C2	23					
			MS	22					

NOTES: ⚠1 REFER TO CMC 4.12-00.

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.12-03
7BQH, ⚠1/⚠1 AD112- C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.12-03A 17-160

12112 LOC: A14 NAME: F0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	24		1	T1	PIB-14	
						2	T2	PIB-13	
						3	F1	TERM	
						4	F2	TERM	
			A2	23		8	T3	PIB-06	
						7	T4	PIB-12	
						6	F3	TERM	
						5	F4	TERM	
			A3	20		11	T5	PIB-03	
						12	T6	PIB-04	
						13	F5	TP-43	
						14	F6	TERM	
			A4	19		18	T7	PIB-02	
						17	T8	PIB-01	
						16	F7	TERM	
						15	F8	TERM	
PIB-27	C8-17		CX	22	FANOUT				

NOTES: ⚠ REFER TO CMC 4.12-00.

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.12-03
7BQH; ⚠/⚠
AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.12-03B
17-161

			CMC 4.12A		CMC 4.12B		CMC 4.12C		CMC 4.12D		CMC 4.12E		CMC 4.12F		CMC 4.12G		CMC 4.12H		CMC 4.12J	
MØDULE: 7BQH			ØCCURRENCE 3Q01		ØCCURRENCE 3Q02		ØCCURRENCE 3Q03		ØCCURRENCE 3Q04		ØCCURRENCE 3Q05		ØCCURRENCE 3Q06		ØCCURRENCE 3Q07		ØCCURRENCE 3Q08		ØCCURRENCE 3Q09	
I/Ø	LØCAL NAME	LØCAL PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE
I	MCK	CMC4.12-00	NCLKN(420)	MAC4.6-04	NCLKN(421)	MAC4.6-04	NCLKN(422)	MAC4.6-04	NCLKN(423)	MAC4.6-04	NCLKN(428)	MAC4.6-04	NCLKN(429)	MAC4.6-04	NCLKN(430)	MAC4.6-04	NCLKN(431)	MAC4.6-04	NCLKN(432)	MAC4.6-04
I	PHM		CLKPM(31)	MAC4.3-04	CLKPM(52)	MAC4.5-04	CLKPM(53)	MAC4.5-04	CLKPM(54)	MAC4.5-04	CLKPM(55)	MAC4.5-04	CLKPM(56)	MAC4.5-04	CLKPM(57)	MAC4.5-04	CLKPM(61)	MAC4.5-04	CLKPM(64)	MAC4.5-04
I	ARESP	CMC4.12-01	BIASI		BIASI		BIASI		ARESP	CMC4.11-03	BIASI		BIASI		BIASI		BIASI		BIASI	
I	ARDSEL(0)	CMC4.12-01	FANØUT(0)	CMC4.12B-03	FANØUT(1)	CMC4.12B-03	FANØUT(2)	CMC4.12B-03	FANØUT(3)	CMC4.12B-03	FANØUT(4)	CMC4.12B-03	FANØUT(5)	CMC4.12B-03	FANØUT(6)	CMC4.12B-03	FANØUT(7)	CMC4.12B-03	FANØUT(8)	CMC4.12B-03
I	(1)	CMC4.12-01	↓	CMC4.12C-03	↓	CMC4.12C-03	↓	CMC4.12C-03	↓	CMC4.12C-03	↓	CMC4.12C-03	↓	CMC4.12C-03	↓	CMC4.12C-03	↓	CMC4.12C-03	↓	CMC4.12C-03
I	BRESP	CMC4.12-02	BIASI		BIASI		BIASI		BRESP	CMC4.11-03	BIASI		BIASI		BIASI		BIASI		BIASI	
I	BRDSEL(0)	CMC4.12-01	FANØUT(0)	CMC4.2-03	FANØUT(1)	CMC4.2-03	FANØUT(2)	CMC4.2-03	FANØUT(3)	CMC4.2-03	FANØUT(4)	CMC4.2-03	FANØUT(5)	CMC4.2-03	FANØUT(6)	CMC4.2-03	FANØUT(7)	CMC4.2-03	FANØUT(8)	CMC4.2-03
I	(1)	↓	↓	CMC4.12D-03	↓	CMC4.12D-03	↓	CMC4.12D-03	↓	CMC4.12D-03	↓	CMC4.12D-03	↓	CMC4.12D-03	↓	CMC4.12D-03	↓	CMC4.12D-03	↓	CMC4.12D-03
I	ERESP	CMC4.12-02	BIASI		BIASI		BIASI		BIASI		BIASI		BIASI		BIASI		BIASI		BIASI	
I	EINT	↓	↓		↓		↓		EINT	CMC4.11-06	↓		↓		↓		↓		↓	
I	IRESP	↓	↓		↓		↓		BIASI		↓		↓		↓		↓		↓	
I	IINT	↓	↓		↓		↓		IINT	CMC4.11-06	↓		↓		↓		↓		↓	
I	DTAG	CMC4.12-01	DTAG(0)	CMC4.11-05	DTAG(1)	CMC4.11-05	DTAG(2)	CMC4.11-05	DTAG(3)	CMC4.11-05	DTAG(4)	CMC4.11-05	DTAG(5)	CMC4.11-05	DTAG(6)	CMC4.11-05	DTAG(7)	CMC4.11-05	DTAG(8)	CMC4.11-05
I	RESPCD	CMC4.12-02	RESPCD(0)	↓	RESPCD(1)	↓	RESPCD(2)	↓	BIASI		BIASI		BIASI		BIASI		BIASI		RESPCD(8)	↓
I	PCBIAS	↓	BIASI		BIASI		BIASI		↓		↓		↓		↓		↓		HI	CMC4.12-03
I	RDDATA(0)	↓	RDDATA(0)	CMC4.8-00	RDDATA(1)	CMC4.8-00	RDDATA(2)	CMC4.8-00	RDDATA(3)	CMC4.8-00	RDDATA(4)	CMC4.8-00	RDDATA(5)	CMC4.8-00	RDDATA(6)	CMC4.8-00	RDDATA(7)	CMC4.8-00	RDDATA(64)	CMC4.8-00
I	(1)	↓	(8)	↓	(9)	↓	(10)	↓	(11)	↓	(12)	↓	(13)	↓	(14)	↓	(15)	↓	(65)	↓
I	(2)	↓	(16)	↓	(17)	↓	(18)	↓	(19)	↓	(20)	↓	(21)	↓	(22)	↓	(23)	↓	(66)	↓
I	(3)	↓	(24)	↓	(25)	↓	(26)	↓	(27)	↓	(28)	↓	(29)	↓	(30)	↓	(31)	↓	(67)	↓
I	RDDATA(4)	↓	RDDATA(32)	CMC4.9-00	RDDATA(33)	CMC4.9-00	RDDATA(34)	CMC4.9-00	RDDATA(35)	CMC4.9-00	RDDATA(36)	CMC4.9-00	RDDATA(37)	CMC4.9-00	RDDATA(38)	CMC4.9-00	RDDATA(39)	CMC4.9-00	RDDATA(64)	CMC4.9-00
I	(5)	↓	(40)	↓	(41)	↓	(42)	↓	(43)	↓	(44)	↓	(45)	↓	(46)	↓	(47)	↓	(65)	↓
I	(6)	↓	(48)	↓	(49)	↓	(50)	↓	(51)	↓	(52)	↓	(53)	↓	(54)	↓	(55)	↓	(66)	↓
I	(7)	↓	(56)	↓	(57)	↓	(58)	↓	(59)	↓	(60)	↓	(61)	↓	(62)	↓	(63)	↓	(67)	↓
I	FRC(0)	↓	FRC(16)	CMC4.16-04	FRC(17)	CMC4.16-04	FRC(18)	CMC4.16-04	FRC(19)	CMC4.16-04	FRC(20)	CMC4.16-04	FRC(21)	CMC4.16-04	FRC(22)	CMC4.16-04	FRC(23)	CMC4.16-04	FRC(66)	CMC4.16-04
I	(1)	↓	(24)	↓	(25)	↓	(26)	↓	(27)	↓	(28)	↓	(29)	↓	(30)	↓	(31)	↓	(67)	↓
I	(2)	↓	(32)	↓	(33)	↓	(34)	↓	(35)	↓	(36)	↓	(37)	↓	(38)	↓	(39)	↓	(68)	↓
I	(3)	↓	(40)	↓	(41)	↓	(42)	↓	(43)	↓	(44)	↓	(45)	↓	(46)	↓	(47)	↓	(69)	↓
I	(4)	↓	(48)	↓	(49)	↓	(50)	↓	(51)	↓	(52)	↓	(53)	↓	(54)	↓	(55)	↓	(70)	↓
I	(5)	↓	(56)	↓	(57)	↓	(58)	↓	(59)	↓	(60)	↓	(61)	↓	(62)	↓	(63)	↓	(71)	↓
I	FØIN	CMC4.12-03	ARDSEL(0)	CMC4.11-02	ARDSEL(1)	CMC4.11-02	BRDSEL(0)	CMC4.11-02	BRDSEL(1)	CMC4.11-02	ENDATØ	CMC4.12-00	BIASI		BIASI		BIASI		BIASI	

NØTES:

△1 CMC 4.12A: C1G/3Q01
4.12B: C1H/3Q02
4.12C: C1J/3Q03
4.12D: C1K/3Q04
4.12E: C1M/3Q05
4.12F: C1N/3Q06
4.12G: C1P/3Q07
4.12H: C1R/3Q08
4.12J: C1S/3Q09

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN
LEVEL 4 ØCCURRENCE CHART
SUPPLEMENTAL WIRING INFØRMATIØN
7BQH: △1
AD112-C
CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.12-ØCA
PAGE 17-162

		MØDULE: 7BQH		CMC 4.12A ØCCURRENCE 3Q01		CMC 4.12B ØCCURRENCE 3Q02		CMC 4.12C ØCCURRENCE 3Q03		CMC 4.12D ØCCURRENCE 3Q04		CMC 4.12E ØCCURRENCE 3Q05		CMC 4.12F ØCCURRENCE 3Q06		CMC 4.12G ØCCURRENCE 3Q07		CMC 4.12H ØCCURRENCE 3Q08		CMC 4.12J ØCCURRENCE 3Q09	
	I/Ø	LØCAL NAME	LØCAL PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE
A PØRT	0	CMRD(0)	CMC4.12-01	CMRD(0)	LM4.5A-00	CMRD(1)	LM4.5A-00	CMRD(2)	LM4.5B-00	CMRD(3)	LM4.5B-00	CMRD(4)	LM4.5C-00	CMRD(5)	LM4.5C-00	CMRD(6)	LM4.5D-00	CMRD(7)	LM4.5D-00	CMRD(64)	LM4.5A-00
	0	(1)		(8)	5A	(9)	5A	(10)	5A	(11)	5A	(12)	5A	(13)	5A	(14)	5A	(15)	5B	(65)	5B
	0	(2)		(16)	5B	(17)	5B	(18)	5B	(19)	5B	(20)	5B	(21)	5B	(22)	5C	(23)	5C	(66)	5C
	0	(3)		(24)	5C	(25)	5C	(26)	5C	(27)	5C	(28)	5C	(29)	5A	(30)	5A	(31)	5A	(67)	5D
	0	(4)		(32)	5A	(33)	5B	(34)	5D	(35)	5D	(36)	5D	(37)	5D	(38)	5D	(39)	5D	(68)	5A
	0	(5)		(40)	5B	(41)	5B	(42)	5B	(43)	5C	(44)	5A	(45)	5A	(46)	5A	(47)	5B	(69)	5B
	0	(6)		(48)	5B	(49)	5B	(50)	5C	(51)	5C	(52)	5C	(53)	5D	(54)	5D	(55)	5D	(70)	5C
	0	(7)		(56)	5C	(57)	5C	(58)	5C	(59)	5D	(60)	5D	(61)	5D	(62)	5D	(63)	5D	(71)	5D
	0	CMRDP(0)		CMRDP(0)	5A	CMRDP(1)	5A	CMRDP(2)	5B	CMRDP(3)	5B	CMRDP(4)	5C	CMRDP(5)	5C	CMRDP(6)	5D	CMRDP(7)	5D	CMRDP(64)	5A
	0	(1)		(8)	5A	(9)	5A	(10)	5A	(11)	5A	(12)	5A	(13)	5A	(14)	5A	(15)	5B	(65)	5B
	0	(2)		(16)	5B	(17)	5B	(18)	5B	(19)	5B	(20)	5B	(21)	5B	(22)	5C	(23)	5C	(66)	5C
	0	(3)		(24)	5C	(25)	5C	(26)	5C	(27)	5C	(28)	5C	(29)	5A	(30)	5A	(31)	5A	(67)	5D
	0	(4)		(32)	5A	(33)	5B	(34)	5D	(35)	5D	(36)	5D	(37)	5D	(38)	5D	(39)	5D	(68)	5A
	0	(5)		(40)	5B	(41)	5B	(42)	5B	(43)	5C	(44)	5A	(45)	5A	(46)	5A	(47)	5B	(69)	5B
	0	(6)		(48)	5B	(49)	5B	(50)	5C	(51)	5C	(52)	5C	(53)	5D	(54)	5D	(55)	5D	(70)	5C
	0	(7)		(56)	5C	(57)	5C	(58)	5C	(59)	5A	(60)	5D	(61)	5D	(62)	5D	(63)	5D	(71)	5D
	0	CMTAG	CMC4.12-01	CMTAG(0)	LM4.4-04	CMTAG(1)	LM4.4-04	CMTAG(2)	LM4.4-04	CMTAG(3)	LM4.4-04	CMTAG(4)	LM4.4-04	CMTAG(5)	LM4.4-04	CMTAG(6)	LM4.4-04	CMTAG(7)	LM4.4-04	CMTAG(8)	LM4.4-04
	0	CMTAGP		CMTAGP(0)		CMTAGP(1)		CMTAGP(2)		CMTAGP(3)		CMTAGP(4)		CMTAGP(5)		CMTAGP(6)		CMTAGP(7)		CMTAGP(8)	
△2 B PØRT	0	CMRSC	CMC4.12-02	CMRSC(0)		CMRSC(1)		CMRSC(2)		NU		NU		NU		NU		NU		CMRSC(3)	
	0	CMRSCP		CMRSCP(0)		CMRSCP(1)		CMRSCP(2)												CMRSCP(3)	
	0	CMRSP		NU		NU		NU		CMRSP	LM4.4-04									NU	
	0	CMRSPP								CMRSPP											
A PØRT	0	CMRSC	CMC4.12-01	CMRSC(0)	LM4.4-04	CMRSC(1)	LM4.4-04	CMRSC(2)	LM4.4-04	NU										CMRSC(3)	LM4.4-04
	0	CMRSCP		CMRSCP(0)		CMRSCP(1)		CMRSCP(2)												CMRSCP(3)	
	0	CMRSP		NU		NU		NU		CMRSP	LM4.4-04									NU	
	0	CMRSPP								CMRSPP											
△2 B PØRT	0	CMRD(0)	CMC4.12-02	CMRD(0)	LM4.5A-00	CMRD(1)	LM4.5A-00	CMRD(2)	LM4.5B-00	CMRD(3)	LM4.5B-00	CMRD(4)	LM4.5C-00	CMRD(5)	LM4.5C-00	CMRD(6)	LM4.5D-00	CMRD(7)	LM4.5D-00	CMRD(64)	LM4.5A-00
	0	(1)		(8)	5A	(9)	5A	(10)	5A	(11)	5A	(12)	5A	(13)	5A	(14)	5A	(15)	5B	(65)	5B
	0	(2)		(16)	5B	(17)	5B	(18)	5B	(19)	5B	(20)	5B	(21)	5B	(22)	5C	(23)	5C	(66)	5C
	0	(3)		(24)	5C	(25)	5C	(26)	5C	(27)	5C	(28)	5C	(29)	5A	(30)	5A	(31)	5A	(67)	5D
	0	(4)		(32)	5A	(33)	5B	(34)	5D	(35)	5D	(36)	5D	(37)	5D	(38)	5D	(39)	5D	(68)	5A
	0	(5)		(40)	5B	(41)	5B	(42)	5B	(43)	5C	(44)	5A	(45)	5A	(46)	5A	(47)	5B	(69)	5B
	0	(6)		(48)	5B	(49)	5B	(50)	5C	(51)	5C	(52)	5C	(53)	5D	(54)	5D	(55)	5D	(70)	5C
	0	(7)		(56)	5C	(57)	5C	(58)	5C	(59)	5D	(60)	5D	(61)	5D	(62)	5D	(63)	5D	(71)	5D
	0	CMRDP(0)		CMRDP(0)	5A	CMRDP(1)	5A	CMRDP(2)	5B	CMRDP(3)	5B	CMRDP(4)	5C	CMRDP(5)	5C	CMRDP(6)	5D	CMRDP(7)	5D	CMRDP(64)	5A
	0	(1)		(8)	5A	(9)	5A	(10)	5A	(11)	5A	(12)	5A	(13)	5A	(14)	5A	(15)	5B	(65)	5B
	0	(2)		(16)	5B	(17)	5B	(18)	5B	(19)	5B	(20)	5B	(21)	5B	(22)	5C	(23)	5C	(66)	5C
	0	(3)		(24)	5C	(25)	5C	(26)	5C	(27)	5C	(28)	5C	(29)	5A	(30)	5A	(31)	5A	(67)	5D
	0	(4)		(32)	5A	(33)	5B	(34)	5D	(35)	5D	(36)	5D	(37)	5D	(38)	5D	(39)	5D	(68)	5A
	0	(5)		(40)	5B	(41)	5B	(42)	5B	(43)	5C	(44)	5A	(45)	5A	(46)	5A	(47)	5B	(69)	5B
	0	(6)		(48)	5B	(49)	5B	(50)	5C	(51)	5C	(52)	5C	(53)	5D	(54)	5D	(55)	5D	(70)	5C
	0	(7)		(56)	5C	(57)	5C	(58)	5C	(59)	5D	(60)	5D	(61)	5D	(62)	5D	(63)	5D	(71)	5D
	0	CMTAG		CMTAG(0)	LM4.4-04	CMTAG(1)	LM4.4-04	CMTAG(2)	LM4.4-04	CMTAG(3)	LM4.4-04	CMTAG(4)	LM4.4-04	CMTAG(5)	LM4.4-04	CMTAG(6)	LM4.4-04	CMTAG(7)	LM4.4-04	CMTAG(8)	LM4.4-04
	0	CMTAGP		CMTAGP(0)		CMTAGP(1)		CMTAGP(2)		CMTAGP(3)		CMTAGP(4)		CMTAGP(5)		CMTAGP(6)		CMTAGP(7)		CMTAGP(8)	

NØTES:

△1 CMC 4.12A: C1G/3Q01
4.12B: C1H/3Q02
4.12C: C1J/3Q03
4.12D: C1K/3Q04
4.12E: C1M/3Q05
4.12F: C1N/3Q06
4.12G: C1P/3Q07
4.12H: C1R/3Q08
4.12J: C1S/3Q09

△2 SECØND CPU (ØPTIØN).

CONTROL DATA CORPORATION	LEVEL 4 ØCCURRENCE CHART SUPPLEMENTAL WIRING INFØRMATIØN	CODE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	7BQH: △1 AD112-C	SHEET CMC 4.12-ØCB		PAGE 17-163

			CMC 4.12A		CMC 4.12B		CMC 4.12C		CMC 4.12D		CMC 4.12E	
MØDULE: 7BQH			ØCCURRENCE 3Q01		ØCCURRENCE 3Q02		ØCCURRENCE 3Q03		ØCCURRENCE 3Q04		ØCCURRENCE 3Q05	
I/Ø	LØCAL NAME	LØCAL PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE
Ø	AUXDAT(0)	CMC4.12-02	AUXDAT(0)	AUX	AUXDAT(1)	AUX	AUXDAT(2)	AUX	AUXDAT(3)	AUX	AUXDAT(4)	AUX
Ø	(1)		(8)		(9)		(10)		(11)		(12)	
Ø	(2)		(16)		(17)		(18)		(19)		(20)	
Ø	(3)		(24)		(25)		(26)		(27)		(28)	
Ø	(4)		(32)		(33)		(34)		(35)		(36)	
Ø	(5)		(40)		(41)		(42)		(43)		(44)	
Ø	(6)		(48)		(49)		(50)		(51)		(52)	
Ø	(7)		(56)		(57)		(58)		(59)		(60)	
Ø	AUXTAG		AUXTAG(0)		AUXTAG(1)		AUXTAG(2)		AUXTAG(3)		AUXTAG(4)	
Ø	AUXRCD		AUXRCD(0)		AUXRCD(1)		AUXRCD(2)		NU		NU	
Ø	AUXRSP(NU)		NU		NU		NU					
Ø	AUXINT								AUXINT	AUX		
Ø	IØUDAT(0)		IØUDAT(0)	IØU	IØUDAT(1)	IØU	IØUDAT(2)	IØU	IØUDAT(3)	IØU	IØUDAT(4)	IØU
Ø	(1)		(8)		(9)		(10)		(11)		(12)	
Ø	(2)		(16)		(17)		(18)		(19)		(20)	
Ø	(3)		(24)		(25)		(26)		(27)		(28)	
Ø	(4)		(32)		(33)		(34)		(35)		(36)	
Ø	(5)		(40)		(41)		(42)		(43)		(44)	
Ø	(6)		(48)		(49)		(50)		(51)		(52)	
Ø	(7)		(56)		(57)		(58)		(59)		(60)	
Ø	IØUTAG		IØUTAG(0)		IØUTAG(1)		IØUTAG(2)		IØUTAG(3)		IØUTAG(4)	
Ø	IØURCD		IØURCD(0)		IØURCD(1)		IØURCD(2)		NU		NU	
Ø	IØURSP		NU		NU		NU					
Ø	IØUINT								IØUINT	IØU		
Ø	FANØUT(0)	CMC4.12-03	ARDSEL(0)	CMC4.12-01	ARDSEL(1)	CMC4.12-01	BRDSEL(0)	CMC4.12-01	BRDSEL(1)	CMC4.12-01	ENDATI	CMC4.12-00
Ø	(1)											
Ø	(2)											
Ø	(3)											
Ø	(4)											
Ø	(5)											
Ø	(6)											
Ø	(7)											
Ø	(8)											
Ø	HI		NU		NU		NU		NU		NU	
Ø	CRBI		NU		NU		NU		CRESP	CMC4.11-01	CBSY	CMC4.11-06

			CMC 4.12F		CMC 4.12G		CMC 4.12H		CMC 4.12J	
MØDULE: 7BQH			ØCCURRENCE 3Q06		ØCCURRENCE 3Q07		ØCCURRENCE 3Q08		ØCCURRENCE 3Q09	
I/Ø	LØCAL NAME	LØCAL PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE	EXTERNAL NAME	EXT. PAGE
Ø	AUXDAT(0)	CMC4.12-02	AUXDAT(5)	AUX	AUXDAT(6)	AUX	AUXDAT(7)	AUX	AUXDAT(64)	AUX
Ø	(1)		(13)		(14)		(15)		(65)	
Ø	(2)		(21)		(22)		(23)		(66)	
Ø	(3)		(29)		(30)		(31)		(67)	
Ø	(4)		(37)		(38)		(39)		(68)	
Ø	(5)		(45)		(46)		(47)		(69)	
Ø	(6)		(53)		(54)		(55)		(70)	
Ø	(7)		(61)		(62)		(63)		(71)	
Ø	AUXTAG		AUXTAG(5)		AUXTAG(6)		AUXTAG(7)		AUXTAG(8)	
Ø	AUXRCD		NU		NU		NU		AUXRCD(3)	
Ø	AUXRSP(NU)								NU	
Ø	AUXINT									
Ø	IØUDAT(0)		IØUDAT(5)	IØU	IØUDAT(6)	IØU	IØUDAT(7)	IØU	IØUDAT(64)	IØU
Ø	(1)		(13)		(14)		(15)		(65)	
Ø	(2)		(21)		(22)		(23)		(66)	
Ø	(3)		(29)		(30)		(31)		(67)	
Ø	(4)		(37)		(38)		(39)		(68)	
Ø	(5)		(45)		(46)		(47)		(69)	
Ø	(6)		(53)		(54)		(55)		(70)	
Ø	(7)		(61)		(62)		(63)		(71)	
Ø	IØUTAG		IØUTAG(5)		IØUTAG(6)		IØUTAG(7)		IØUTAG(8)	
Ø	IØURCD		NU		NU		NU		IØURCD(3)	
Ø	IØURSP								NU	
Ø	IØUINT									
Ø	FANØUT(0)	CMC4.12-03								
Ø	(1)									
Ø	(2)									
Ø	(3)									
Ø	(4)									
Ø	(5)									
Ø	(6)									
Ø	(7)									
Ø	(8)									
Ø	HI								PCBIAS	CMC4.12-02
Ø	CRBI		CINT	CMC4.11-06					NU	

NØTES:

⚠ CMC 4.12A: CIG/3Q01
4.12B: CIH/3Q02
4.12C: CIJ/3Q03
4.12D: CIK/3Q04
4.12E: CIM/3Q05
4.12F: CIN/3Q06
4.12G: CIP/3Q07
4.12H: CIR/3Q08
4.12J: CIS/3Q09

CD CONTROL DATA CORPORATION	LEVEL 4 ØCCURRENCE CHART SUPPLEMENTAL WIRING INFØRMATIØN	CODE IDENT / DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	7BQH: ⚠ AD112-C	SHEET CMC 4.12-ØCC	PAGE 17-164

LEFT ZIF △2					
BIT NAME	I/Ø	SHEET CMC 4.12-	TYPE	VIRTUAL PIN	REAL PIN
ARESP	I	01	Z	Q20	P1A 07
BRESP		02		23	08
ERESP				26	09
EINT				27	03
IRESP		↓		28	10
IINT		02		29	04
DTAG		01		2A	15
RESPCD	↓	02	↓	2B	↓ 26
PCBIAS	I	02	Z	2C	P1A 02
CBRD(0)	Ø	02	D	A6	P2A-39
CBRDP(0)				AE	40
(1)				A7	37
(1)				AF	38
(2)				A8	33
(2)				B0	34
(3)				A9	31
(3)				B1	32
(4)				AA	29
(4)				B2	30
(5)				AB	27
(5)				B3	28
(6)				AC	23
↓ (6)				B4	24
CBRD(7)				AD	21
CBRDP(7)				B5	22
CBTAG				B6	19
CBTAGP				B7	20
CBRSC				B8	17
CBRSCP				B9	18
CBRSP			↓	BA	13
CBRSPP			D	BB	14
IØUDAT(0)			C	C8	11
(1)				C9	10
(2)				CA	07
(3)				CB	06
(4)				CC	↓ 03
(5)				CD	P2A-02
↓ (6)				CE	P1A-39
IØUDAT(7)				CF	38
IØUTAG				D0	35
IØURCD				D1	34
IØURSP		↓	↓	D2	31
IØUINT		02	C	D3	30
HI	↓	03	Z	↓ DD	01
CRBI	Ø	00	Z	QDF	27
GND					29
					32
					33
					↓ 37
					P1A-40
					P2A-01
					04
					08
↓					↓ 09
GND					P2A-12

CØAX △2					
BIT NAME	I/Ø	SHEET CMC 4.12-	TYPE	VIRTUAL PIN	REAL PIN
MCK	I	00	C	Q00	P1C-106
PHM		00		01	097
FRC (0)		02		35	170
(1)				36	019
(2)				37	169
(3)				38	020
↓ (4)	↓	↓	↓	↓ 39	↓ 165
FRC (5)	I	02	C	Q3A	P1C-166

RIGHT ZIF △2					
BIT NAME	I/Ø	SHEET CMC 4.12-	TYPE	VIRTUAL PIN	REAL PIN
ENDATI	I	00	Z	Q03	P1B-11
ARDSEL(0)		01		21	07
ARDSEL(1)				22	08
BRDSEL(0)		↓		24	09
BRDSEL(1)		01		25	10
RDDATA(0)		02		2D	17
(1)				2E	19
(2)				2F	21
(3)				30	23
(4)				31	18
(5)				32	20
↓ (6)		↓		33	22
RDDATA(7)	↓	02	↓	34	↓ 24
FØIN	I	03	Z	3B	P1B-27
CMRD(0)	Ø	01	D	90	P2B-39
CMRDP(0)				98	40
(1)				91	37
(1)				99	38
(2)				92	33
(2)				9A	34
(3)				93	31
(3)				9B	32
(4)				94	29
(4)				9C	30
(5)				95	27
(5)				9D	28
(6)				96	23
↓ (6)				9E	24
CMRD(7)				97	21
CMRDP(7)				9F	22
CMTAG				A0	19
CMTAP				A1	20
CMRSC				A2	17
CMRSCP				A3	18
CMRSP		↓	↓	A4	13
CMRSPP		01	D	A5	14
ECSDAT(0)		02	C	BC	11
(1)				BD	10
(2)				BE	07
(3)				BF	06
(4)				C0	↓ 03
(5)				C1	P2B-02
↓ (6)				C2	P1B-39
ECSDAT(7)				C3	38
ECSTAG				C4	35
ECSRCD				C5	34
ECSRSP		↓	↓	C6	31
ECSINT		02	C	C7	30
FANØUT(0)		03	Z	D4	01
(1)				D5	02
(2)				D6	03
(3)				D7	04
(4)				D8	06
(5)				D9	12
(6)				DA	13
↓ (7)		↓		DB	14
FANØUT(8)	↓	03	↓	↓ DC	15
GND					29
					32
					33
					↓ 37
					P1B-40
					P2B-01
					04
					08
↓					↓ 09
GND					P2B-12

NØTES:

△1 CMC 4.12A:C1G/3Q01
4.12B:C1H/3Q02
4.12C:C1J/3Q03
4.12D:C1K/3Q04
4.12E:C1M/3Q05
4.12F:C1N/3Q06
4.12G:C1P/3Q07
4.12H:C1R/3Q08
4.12J:C1S/3Q09

ZIF GRØUND PINS			
P1A-05	P1A-25	P2A-05	P2A-25
P1A-16	P1A-36	P2A-16	P2A-36

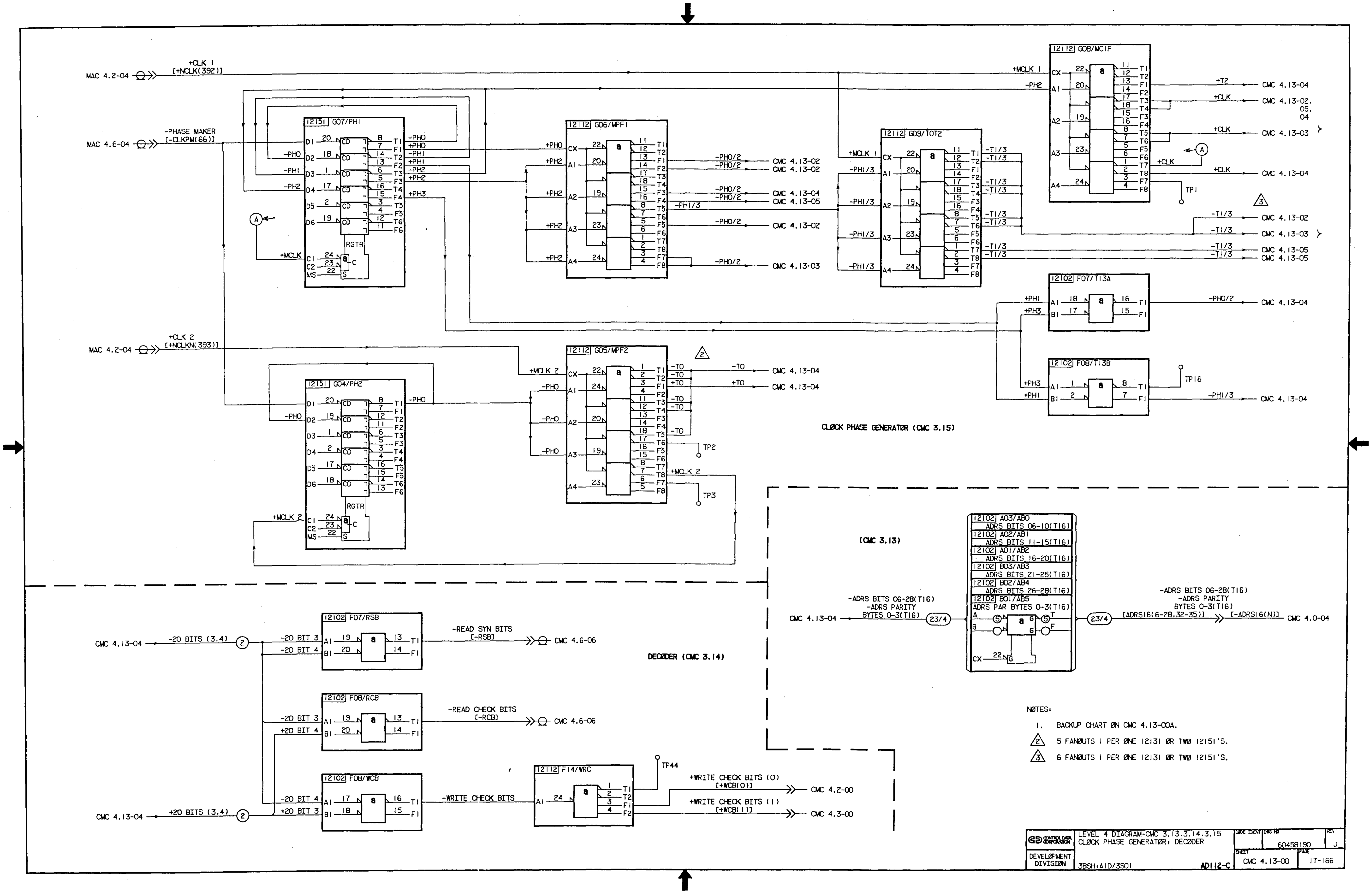
△2 CØNNECTØR TYPES:

C = CØAX
D = DIFFERENTIAL
Z = ZIF TØ FØIL ØN INTERCØNNECT BØARD

△3 SEE CØNNECTØR CHARTS CMC 4.12-ØCA.B.C.

ZIF GRØUND PINS			
P1B-05	P1B-25	P2B-05	P2B-25
P1B-16	P1B-36	P2B-16	P2B-36

CONTROL DATA CORPORATION	LEVEL 4 CØNNECTØR CHART SUPPLEMENTAL WIRING INFØRMATIØN	CODE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	7BQH: △1 AD112-C	SHEET CMC 4.12-CC		PAGE 17-165



NOTES:

1. BACKUP CHART ON CMC 4.13-00A.

△2 5 FANOUTS 1 PER ONE 12131 OR TWO 12151'S.

△3 6 FANOUTS 1 PER ONE 12131 OR TWO 12151'S.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.13.3.14.3.15
CLOCK PHASE GENERATOR; DECODER

3BSH;A1D/3S01 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.13-00	17-166

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12102 LOC: A03 NAME: AB0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A12-11	PIA-37		A1	19	ADRS	13	T1	PIA-7	
			B1	20	BIT 06 (T16)	14	F1	TERM	
A12-8	PIA-38		A2	1	ADRS	8	T2	PIA-8	
			B2	2	BIT 07 (T16)	7	F2	TERM	
A12-7	PIA-39		A3	3	ADRS	5	T3	PIA-9	
			B3	4	BIT 08 (T16)	6	F3	TERM	
A13-12	PIA-40		A4	17	ADRS	16	T4	PIA-10	
			B4	18	BIT 09 (T16)	15	F4	TERM	
A13-11	P2A-1		A5	23	ADRS	12	T5	PIA-11	
			B5	24	BIT 10 (T16)	11	F5	TERM	
			CX	22					

12102 LOC: B01 NAME: AB5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D7-16		T	A1	1	ADRS PAR	8	T1	PIA-32	
			B1	2	BYTE 0 (T16)	7	F1	TERM	
D7-18		T	A2	3	ADRS PAR	5	T2	PIA-33	
			B2	4	BYTE 1 (T16)	6	F2	TERM	
B7-2		T	A3	17	ADRS PAR	16	T3	PIA-34	
			B3	18	BYTE 2 (T16)	15	F3	TERM	
B7-4		T	A4	19	ADRS PAR	13	T4	PIA-35	
			B4	20	BYTE 3 (T16)	14	F4	TERM	
			A5	23		12	T5		
			B5	24		11	F5		
			CX	22					

12102 LOC: A02 NAME: AB1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A13-8	P2A-2		A1	23	ADRS	12	T1	PIA-12	
			B1	24	BIT 11 (T16)	11	F1	TERM	
A13-7	P2A-4		A2	3	ADRS	5	T2	PIA-13	
			B2	4	BIT 12 (T16)	6	F2	TERM	
A14-7	P2B-22		A3	17	ADRS	16	T3	PIA-14	
			B3	18	BIT 13 (T16)	15	F3	TERM	
A14-8	P2B-23		A4	1	ADRS	8	T4	PIA-15	
			B4	2	BIT 14 (T16)	7	F4	TERM	
A14-11	P2B-24		A5	19	ADRS	13	T5	PIA-17	
			B5	20	BIT 15 (T16)	14	F5	TERM	
			CX	22					

12102 LOC: A01 NAME: AB2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A14-12	P2B-26		A1	17	ADRS	16	T1	PIA-18	
			B1	18	BIT 16 (T16)	15	F1	TERM	
B12-12	P2B-27		A2	3	ADRS	5	T2	PIA-19	
			B2	4	BIT 17 (T16)	6	F2	TERM	
B12-11	P2B-28		A3	1	ADRS	8	T3	PIA-20	
			B3	2	BIT 18 (T16)	7	F3	TERM	
B12-8	P2B-29		A4	19	ADRS	13	T4	PIA-21	
			B4	20	BIT 19 (T16)	14	F4	TERM	
B12-7	P2B-30		A5	23	ADRS	12	T5	PIA-22	
			B5	24	BIT 20 (T16)	11	F5	TERM	
			CX	22					

12102 LOC: B03 NAME: AB3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B13-12	P2B-32		A1	1	ADRS	8	T1	PIA-23	
			B1	2	BIT 21 (T16)	7	F1	TERM	
B13-11	P2B-9		A2	3	ADRS	5	T2	PIA-24	
			B2	4	BIT 22 (T16)	6	F2	TERM	
B13-8	P2B-10		A3	17	ADRS	16	T3	PIA-26	
			B3	18	BIT 23 (T16)	15	F3	TERM	
B13-7	P2B-11		A4	19	ADRS	13	T4	PIA-27	
			B4	20	BIT 24 (T16)	14	F4	TERM	
B14-7	P2B-12		A5	23	ADRS	12	T5	PIA-28	
			B5	24	BIT 25 (T16)	11	F5	TERM	
			CX	22					

12102 LOC: B02 NAME: AB4

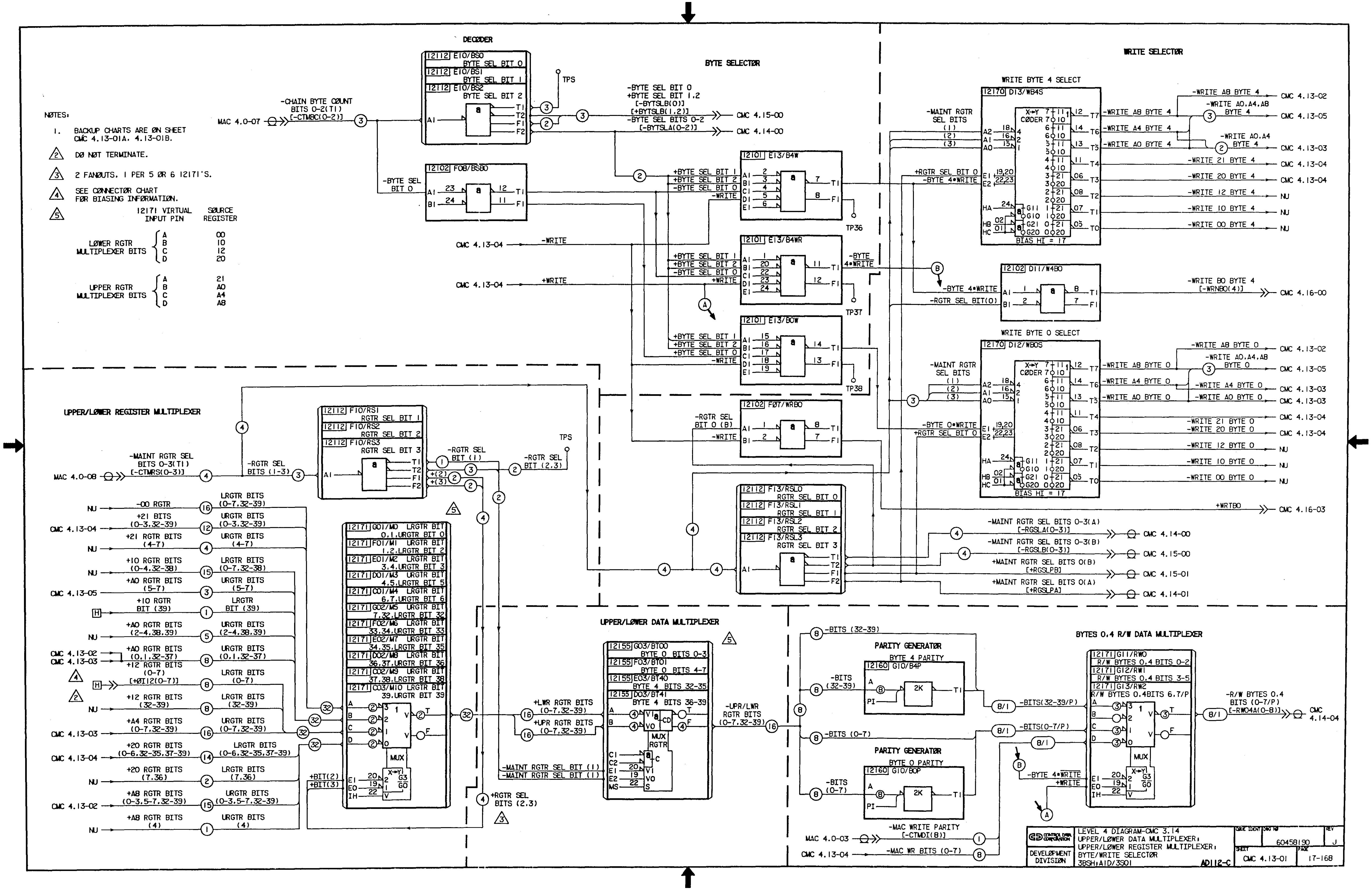
SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B14-8	P2B-14		A1	1	ADRS	8	T1	PIA-29	
			B1	2	BIT 26 (T16)	7	F1	TERM	
E7-2		T	A2	3	ADRS	5	T2	PIA-30	
			B2	4	BIT 27 (T16)	6	F2	TERM	
E7-4		T	A3	17	ADRS	16	T3	PIA-31	
			B3	18	BIT 28 (T16)	15	F3	TERM	
			A4	19		13	T4		
			B4	20		14	F4		
			A5	23		12	T5		
			B5	24		11	F5		
			CX	22					

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.13-00
3BSH; AID/3301 AD112-C

CODE IDENT		DWG NO	REV
34010	D	60458190	J
		SHEET CMC 4.13-00A	17-167

24613176


DECODER
BYTE SELECTOR
WRITE SELECTOR
WRITE BYTE 4 SELECT
WRITE BYTE 0 SELECT
UPPER/LOWER REGISTER MULTIPLEXER
UPPER/LOWER DATA MULTIPLEXER
BYTES 0.4 R/W DATA MULTIPLEXER
PARITY GENERATOR
BYTE 4 PARITY
BYTE 0 PARITY
MAC 4.0-07
-CHAIN BYTE COUNT BITS 0-2(T1) [-CTMBC(0-2)]
12112 E10/BS0 BYTE SEL BIT 0
12112 E10/BS1 BYTE SEL BIT 1
12112 E10/BS2 BYTE SEL BIT 2
12102 F08/BSB0
-BYTE SEL BIT 0
TPS
-BYTE SEL BIT 0 +BYTE SEL BIT 1.2 [-BYTSLB(0)] [+BYTSLB(1.2)]
-BYTE SEL BITS 0-2 [-BYTSLA(0-2)]
CMC 4.15-00
CMC 4.14-00
12101 E13/B4W
12101 E13/B4WR
12101 E13/B0W
12102 F0T/WRB0
12102 D11/W4B0
12170 D13/WB4S
12170 D12/WB0S
X→Y CODER
BIAS HI = 17
TP36
TP37
TP38
CMC 4.13-04 -WRITE
CMC 4.13-04 +WRITE
-BYTE 4•WRITE
-MAINT RGTR SEL BITS (1) (2) (3)
+RGTR SEL BIT 0
-RGTR SEL BIT(0)
-BYTE 0•WRITE
-WRITE A8 BYTE 4 CMC 4.13-02
-WRITE A0.A4.A8 BYTE 4 CMC 4.13-05
-WRITE A0.A4 BYTE 4 CMC 4.13-03
-WRITE 21 BYTE 4 CMC 4.13-04
-WRITE 20 BYTE 4 CMC 4.13-04
-WRITE 12 BYTE 4 NU
-WRITE 10 BYTE 4 NU
-WRITE 00 BYTE 4 NU
-WRITE B0 BYTE 4 [-WRNB0(4)] CMC 4.16-00
-WRITE A8 BYTE 0 CMC 4.13-02
-WRITE A0.A4.A8 BYTE 0 CMC 4.13-05
-WRITE A4 BYTE 0 CMC 4.13-03
-WRITE A0 BYTE 0 CMC 4.13-03
-WRITE 21 BYTE 0 CMC 4.13-04
-WRITE 20 BYTE 0 CMC 4.13-04
-WRITE 12 BYTE 0 NU
-WRITE 10 BYTE 0 NU
-WRITE 00 BYTE 0 NU
+WRTB0 CMC 4.16-03
-MAINT RGTR SEL BITS 0-3(A) [-RGSLA(0-3)] CMC 4.14-00
-MAINT RGTR SEL BITS 0-3(B) [-RGSLB(0-3)] CMC 4.15-00
+MAINT RGTR SEL BITS 0(B) [+RGSLPB] CMC 4.15-01
+MAINT RGTR SEL BITS 0(A) [+RGSLPA] CMC 4.14-01
12112 F10/RS1 RGTR SEL BIT 1
12112 F10/RS2 RGTR SEL BIT 2
12112 F10/RS3 RGTR SEL BIT 3
-MAINT RGTR SEL BITS 0-3(T1) [-CTMRS(0-3)]
MAC 4.0-08
-RGTR SEL BITS (1-3)
-RGTR SEL BIT (1)
-RGTR SEL BIT (2.3)
12112 F13/RSL0 RGTR SEL BIT 0
12112 F13/RSL1 RGTR SEL BIT 1
12112 F13/RSL2 RGTR SEL BIT 2
12112 F13/RSL3 RGTR SEL BIT 3
-RGTR SEL BIT 0 (B)
-00 RGTR
+21 BITS (0-3.32-39)
+21 RGTR BITS (4-7)
+10 RGTR BITS (0-4.32-38)
+A0 RGTR BITS (5-7)
+10 RGTR BIT (39)
+A0 RGTR BITS (2-4.38.39)
+A0 RGTR BITS (0.1.32-37)
+12 RGTR BITS (0-7) [-0I12(0-7)]
+12 RGTR BITS (32-39)
+A4 RGTR BITS (0-7.32-39)
+20 RGTR BITS (0-6.32-35.37-39)
+20 RGTR BITS (7.36)
+A8 RGTR BITS (0-3.5-7.32-39)
+A8 RGTR BITS (4)
LRGTR BITS (0-7.32-39)
URGTR BITS (0-3.32-39)
URGTR BITS (4-7)
LRGTR BITS (0-7.32-38)
URGTR BITS (5-7)
LRGTR BIT (39)
URGTR BITS (2-4.38.39)
URGTR BITS (0.1.32-37)
LRGTR BITS (0-7)
LRGTR BITS (32-39)
URGTR BITS (0-7.32-39)
LRGTR BITS (0-6.32-35.37-39)
LRGTR BITS (7.36)
URGTR BITS (0-3.5-7.32-39)
URGTR BITS (4)
CMC 4.13-04
CMC 4.13-05
CMC 4.13-02
CMC 4.13-03
NU
12171 G01/M0 LRGTR BIT 0.1.URGTR BIT 0
12171 F01/M1 LRGTR BIT 1.2.LRGTR BIT 2
12171 E01/M2 URGTR BIT 3.4.URGTR BIT 3
12171 D01/M3 URGTR BIT 4.5.LRGTR BIT 5
12171 C01/M4 LRGTR BIT 6.7.URGTR BIT 6
12171 G02/M5 URGTR BIT 7.32.LRGTR BIT 32
12171 F02/M6 LRGTR BIT 33.34.URGTR BIT 33
12171 E02/M7 URGTR BIT 34.35.LRGTR BIT 35
12171 D02/M8 URGTR BIT 36.37.URGTR BIT 36
12171 C02/M9 URGTR BIT 37.38.LRGTR BIT 38
12171 C03/M10 LRGTR BIT 39.URGTR BIT 39
MUX
+BIT(2) +BIT(3)
+LWR RGTR BITS (0-7.32-39)
+UPR RGTR BITS (0-7.32-39)
-MAINT RGTR SEL BIT (1)
-MAINT RGTR SEL BIT (1)
+RGTR SEL BITS (2.3)
12155 G03/BT00 BYTE 0 BITS 0-3
12155 F03/BT01 BYTE 0 BITS 4-7
12155 E03/BT40 BYTE 4 BITS 32-35
12155 D03/BT41 BYTE 4 BITS 36-39
MUX RGTR
-UPR/LWR RGTR BITS (0-7.32-39)
-BITS (32-39)
-BITS (0-7)
12160 G10/B4P
12160 G10/B0P
2K
-MAC WRITE PARITY [-CTMDI(8)]
MAC 4.0-03
-MAC WR BITS (0-7)
CMC 4.13-04
-BITS(32-39/P)
-BITS(0-7/P)
8/1
12171 G11/RW0 R/W BYTES 0.4 BITS 0-2
12171 G12/RW1 R/W BYTES 0.4 BITS 3-5
12171 G13/RW2 R/W BYTES 0.4BITS 6.7/P
-BYTE 4•WRITE +WRITE
-R/W BYTES 0.4 BITS (0-7/P) [-RW04A(0-8)]
CMC 4.14-04

NOTES:

1. BACKUP CHARTS ARE ON SHEET CMC 4.13-01A, 4.13-01B.

2. DO NOT TERMINATE.

3. 2 FANOUTS. 1 PER 5 OR 6 12171'S.

4. SEE CONNECTOR CHART FOR BIASING INFORMATION.

5.

		12171 VIRTUAL INPUT PIN	SOURCE REGISTER
LOWER RGTR MULTIPLEXER BITS		A	00
		B	10
		C	12
		D	20
UPPER RGTR MULTIPLEXER BITS		A	21
		B	A0
		C	A4
		D	A8

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.14
UPPER/LOWER DATA MULTIPLEXER;
UPPER/LOWER REGISTER MULTIPLEXER;
BYTE/WRITE SELECTOR
3BSH;A1D/3S01
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.13-01	17-168

REVISION RECORD

REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12112 LOC: E10 NAME: BS0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F8-23		T	A1	24	BYTE SELECT BIT 0	1	T1	TP-14	
						2	T2	P2B-18	
						4	F1	TERM	
						3	F2	P2B-13	

12112 LOC: E10 NAME: BS1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1C-126		T	A1	23	BYTE SELECT BIT 1	8	T1	TP-20	
						7	T2	TERM	
						6	F1	P2B-19	
						5	F2	E13-1	

12112 LOC: E10 NAME: BS2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1C-117		T	A1	20	BYTE SELECT BIT 2	11	T1	TP-17	
						12	T2	TERM	
						13	F1	P2B-20	
						14	F2	E13-16	

12112 LOC: F10 NAME: RS1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1C-121	D12-18		A1	24	REG SELECT BIT 1	1	T1	G3-19	
						2	T2	G3-20	
						3	F1	TERM	
						4	F2	TERM	

12112 LOC: F10 NAME: RS2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1C-125	D12-16		A1	23	REG SELECT BIT 2	8	T1	TERM	
						7	T2	TP-43	
						6	F1	F2-20	
						5	F2	E2-20	

12112 LOC: F10 NAME: RS3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1C-122	D12-15		A1	20	REG SELECT BIT 3	11	T1	TERM	
						12	T2	TP-42	
						13	F1	E2-19	
						14	F2	F2-19	

12112 LOC: F13 NAME: RSL0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1C-178	D11-2		A1	19	REG SELECT BIT 0	18	T1	P1C-185	
						17	T2	F7-1	
						16	F1	D12-22	
						15	F2	D13-20	

12112 LOC: F13 NAME: RSL1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D13-18		T	A1	24	REG SELECT BIT 1	1	T1	P1C-174	
						2	T2	P1C-169	
						3	F1	TERM	
						4	F2	TERM	

12112 LOC: F13 NAME: RSL2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D13-16		T	A1	23	REG SELECT BIT 2	8	T1	P1C-157	
						7	T2	P1C-162	
						6	F1	TERM	
						5	F2	TERM	

12112 LOC: F13 NAME: RSL3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D13-15		T	A1	20	REG SELECT BIT 3	11	T1	P1C-161	
						12	T2	P1C-166	
						13	F1	TERM	
						14	F2	TERM	

12171 LOC: G01 NAME: M0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	23	L REG BIT 0	11	T1	G3-2	
			B1	24		12	F1	TERM	
P2A-40			C1	1					
C4-6	P1A-1		D1	2					
B4-6		T	A2	3	U REG BIT 0	7	T2	G3-1	
A09-1	F08-4		B2	4		8	F2	TERM	
D11-24		T	C2	5					
F5-16	D11-23		D2	6					
			A3	15	L REG BIT 1	14	T3	G3-4	
			B3	16		13	F3	TERM	
P2A-39			C3	17					
C4-3		T	D3	18					
G2-20	F1-20		E1	20					
G2-19	F1-19		E0	19					
			IH	22					

12171 LOC: F01 NAME: M1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B4-3		T	A1	3	U REG BIT 1	7	T1	G3-3	
F6-13	F8-3		B1	4		8	F1	TERM	
F6-12		T	C1	5					
F6-8		T	D1	6					
			A2	15	L REG BIT 2	14	T2	G3-16	
			B2	16		13	F2	TERM	
P2A-38			C2	17					
C4-8		T	D2	18					
B4-8		T	A3	23	U REG BIT 2	11	T3	G3-15	
			B3	24		12	F3	TERM	
D9-3		T	C3	1					
F5-14		T	D3	2					
G1-20	E1-20		E1	20					
G1-19	E1-19		E0	19					
			IH	22					

12171 LOC: E01 NAME: M2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	23	L REG BIT 3	11	T1	G3-18	
			B1	24		12	F1	TERM	
P2A-37			C1	1					
F8-18		T	D1	2					
B4-12		T	A2	3	U REG BIT 3	7	T2	G3-17	
			B2	4		8	F2	TERM	
D9-6		T	C2	5					
F5-3		T	D2	6					
			A3	15	L REG BIT 4	14	T3	F3-2	
			B3	16		13	F3	TERM	
P2A-35			C3	17					
C4-14	F8-20		D3	18					
F1-20		T	E1	20					
F1-19		T	E0	19					
			IH	22					

12171 LOC: D01 NAME: M3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	23	U REG BIT 4	11	T1	F3-1	
			B1	24		12	F1	TERM	
D9-8		T	C1	1					
			D1	2					
			A2	3	L REG BIT 5	7	T2	F3-4	
			B2	4		8	F2	TERM	
P2A-34			C2	5					
C4-16		T	D2	6					
			A3	15	U REG BIT 5	14	T3	F3-3	
G14-3		T	B3	16		13	F3	TERM	
D9-12		T	C3	17					
F05-6		T	D3	18					
D2-20	C1-20		E1	20					
D2-19	C1-19		E0	19					
			IH	22					

12171 LOC: C01 NAME: M4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L REG BIT 6	7	T1	F3-16	
			B1	4		8	F1	TERM	
P2A-33			C1	5					
A5-7		T	D1	6					
			A2	15	U REG BIT 6	14	T2	F3-15	
G14-6		T	B2	16		13	F2	TERM	
D9-14		T	C2	17					
F05-12			D2	18					
			A3	23	L REG BIT 7	11	T3	F3-18	
			B3	24		12	F3	TERM	
P2A-31			C3	1					
			D3	2					
D1-20	C2-20		E1	20					
D1-19	C2-19		E0	19					
			IH	22					

12171 LOC: G02 NAME: M5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	U REG BIT 7	7	T1	F3-17	
G14-8		T	B1	4		8	F1	TERM	
D9-16		T	C1	5					
F05-8		T	D1	6					
			A2	15	L REG BIT 32	14	T2	E3-2	
			B2	16		13	F2	TERM	
			C2	17					
A4-6	P2A-10		D2	18					
B5-6		T	A3	23	U REG BIT 32	11	T3	E3-1	
B8-3		T	B3	24		12	F3	TERM	
C8-3		T	C3	1					
E5-3		T	D3	2					
F2-20	G1-20		E1	20					
F2-19	G1-19		E0	19					
			IH	22					

12171 LOC: F02 NAME: M6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L REG BIT 33	7	T1	E3-4	
			B1	4		8	F1	TERM	
			C1	5					
A4-3	P2B-34		D1	6					
B5-3		T	A2	15	U REG BIT 33	14	T2	E3-3	
B8-6		T	B2	16		13	F2	TERM	
C8-6		T	C2	17					
E5-6		T	D2	18					
			A3	23	L REG BIT 34	11	T3	E3-16	
			B3	24		12	F3	TERM	
			C3	1					
A4-8	P2A-9		D3	2					
F10-6	G2-20		E1	20					
F10-14	G2-19		E0	19					
			IH	22					

12171 LOC: E02 NAME: M7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B5-8		T	A1	3	U REG BIT 34	7	T1	E3-15	
B8-8		T	B1	4		8	F1	TERM	
C8-8		T	C1	5					
E5-8		T	D1	6					
			A2	15	L REG BIT 35	14	T2	E3-18	
			B2	16		13	F2	TERM	
			C2	17					
A4-12	P2B-38		D2	18					
B5-12		T	A3	23	U REG BIT 35	11	T3	E3-17	
B8-12		T	B3	24		12	F3	TERM	
C8-12		T	C3	1					
E5-12		T	D3	2					
F10-5	D2-20		E1	20					
F10-13	D2-19		E0	19					
			IH	22					

12171 LOC: D02 NAME: M8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L REG BIT 36	7	T1	D3-2	
			B1	4		8	F1	TERM	
			C1	5					
			D1	6					
B5-14		T	A2	15	U REG BIT 36	14	T2	D3-1	
B8-14		T	B2	16		13	F2	TERM	
C8-14		T	C2	17					
E5-14		T	D2	18					
			A3	23	L REG BIT 37	11	T3	D3-4	
			B3	24		12	F3	TERM	
			C3	1					
A4-16		T	D3	2					
E2-20	D1-20		E1	20					
E2-19	D1-19		E0	19					
			IH	22					

12171 LOC: C02 NAME: M9

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B5-16		T	A1	3	U REG BIT 37	7	T1	D3-3	
B8-16		T	B1	4		8	F1	TERM	
C8-16		T	C1	5					
E5-16		T	D1	6					
			A2	15	L REG BIT 38	14	T2	D3-16	
			B2	16		13	F2	TERM	
			C2	17					
A5-11	P1C-31		D2	18					
C5-7		T	A3	23	U REG BIT 38	11	T3	D3-15	
			B3	24		12	F3	TERM	
C9-14		T	C3	1					
D5-12		T	D3	2					
C1-20	C3-20		E1	20					
C1-19	C3-19		E0	19					
			IH	22					

12171 LOC: C03 NAME: M10

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L REG BIT 39	7	T1	D3-18	
H1			B1	4		8	F1	TERM	
			C1	5					
A6-11	P1C-32		D1	6					
C5-11		T	A2	23	U REG BIT 39	11	T2	D3-17	
			B2	24		12	F2	TERM	
B9-11		T	C2	1					
D5-8		T	D2	2					
			A3	15		14	T3		
			B3	16		13	F3		
			C3	17					
			D3	18					
C2-20		T	E1	20					
C2-19		T	E0	19					
			IH	22					

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.13-01
3BSH; AID/3301 AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.13-01A
17-169

24613176

12155 LOC: G03 NAME: BT00

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G1-11		T	A1	2	BYTE 0	8	T1	TERM	
G1-7		T	B1	1	BIT 0	7	F1	G10-4	
G1-14		T	A2	4	BYTE 0	5	T2	TERM	
F1-7		T	B2	3	BIT 1	6	F2	G10-5	
F1-14		T	A3	16	BYTE 0	13	T3	TERM	
F1-11		T	B3	15	BIT 2	14	F3	G10-2	
E1-11		T	A4	18	BYTE 0	12	T4	TERM	
E1-7		T	B4	17	BIT 3	11	F4	G10-3	
			C1						
			C2						
F10-2	F3-20		E1	20					
F10-1	F3-19		E2	19					
			MS	22					

12155 LOC: F03 NAME: BT01

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E1-14		T	A1	2	BYTE 0	8	T1	TERM	
D1-11		T	B1	1	BIT 4	7	F1	G10-24	
D1-7		T	A2	4	BYTE 0	5	T2	TERM	
D1-14		T	B2	3	BIT 5	6	F2	G10-1	
C1-7		T	A3	16	BYTE 0	13	T3	TERM	
C1-14		T	B3	15	BIT 6	14	F3	G10-22	
C1-11		T	A4	18	BYTE 0	12	T4	TERM	
G2-7		T	B4	17	BIT 7	11	F4	G10-23	
			C1						
			C2						
G3-20	E3-20		E1	20					
G3-19	E3-19		E2	19					
			MS	22					

12155 LOC: E03 NAME: BT40

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G2-14		T	A1	2	BYTE 4	8	T1	TERM	
G2-11		T	B1	1	BIT 32	7	F1	G10-13	
F2-7		T	A2	4	BYTE 4	5	T2	TERM	
F2-14		T	B2	3	BIT 33	6	F2	G10-14	
F2-11		T	A3	16	BYTE 4	13	T3	TERM	
E2-7		T	B3	15	BIT 34	14	F3	G10-16	
E2-14		T	A4	18	BYTE 4	12	T4	TERM	
E2-11		T	B4	17	BIT 35	11	F4	G10-15	
			C1						
			C2						
F3-20	D3-20		E1	20					
F3-19	D3-19		E2	19					
			MS	22					

12155 LOC: D03 NAME: BT41

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D2-7		T	A1	2	BYTE 4	8	T1	TERM	
D2-14		T	B1	1	BIT 36	7	F1	G10-18	
D2-11		T	A2	4	BYTE 4	5	T2	TERM	
C2-7		T	B2	3	BIT 37	6	F2	G10-17	
C2-14		T	A3	16	BYTE 4	13	T3	TERM	
C2-11		T	B3	15	BIT 38	14	F3	G10-19	
C3-7		T	A4	18	BYTE 4	12	T4	TERM	
C3-11		T	B4	17	BIT 39	11	F4	G10-20	
			C1						
			C2						
E3-20		T	E1	20					
E3-19		T	E2	19					
			MS	22					

12160 LOC: G10 NAME: B4P

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E3-7	G11-3		A1	13	BIT 32	11	T1	G13-15	
E3-6	G11-23		A2	14	BIT 33				
E3-14	G11-15		A3	16	BIT 34				
E3-11	G12-3		A4	15	BIT 35				
D3-7	G12-23		A5	18	BIT 36				
D3-6	G12-15		A6	17	BIT 37				
D3-14	G13-3		A7	19	BIT 38				
D3-11	G13-23		A8	20	BIT 39				
			PI	12					

12160 LOC: G10 NAME: B0P

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
G3-7	G11-5		A1	4	BIT 0	7	T1	G13-17	
G3-6	G11-1		A2	5	BIT 1				
G3-14	G11-17		A3	2	BIT 2				
G3-11	G12-5		A4	3	BIT 3				
F3-7	G12-1		A5	24	BIT 4				
F3-6	G12-17		A6	1	BIT 5				
F3-14	G13-5		A7	22	BIT 6				
F3-11	G13-1		A8	23	BIT 7				
			PI	6					

12171 LOC: G11 NAME: RW0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G10-13		T	A1	3	R/W BYTES 0, 4 BIT 0	7	T1	PIC-138	
			B1	4		8	F1	TERM	
G10-4		T	C1	5					
E7-1	E14-18		D1	6					
G10-14		T	A2	23	R/W BYTES 0, 4 BIT 1	11	T2	PIC-133	
			B2	24		12	F2	TERM	
G10-5		T	C2	1					
E7-3		T	D2	2					
G10-16		T	A3	15	R/W BYTES 0, 4 BIT 2	14	T3	PIC-145	
			B3	16		13	F3	TERM	
G10-2		T	C3	17					
E7-15		T	D3	18					
G12-20		T	E1	20					
G12-19		T	E0	19					
			IH	22					

12171 LOC: G12 NAME: RW1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G10-15		T	A1	3	R/W BYTES 0, 4 BIT 3	7	T1	PIC-149	
			B1	4		8	F1	TERM	
G10-3		T	C1	5					
E7-17		T	D1	6					
G10-18		T	A2	23	R/W BYTES 0, 4 BIT 4	11	T2	PIC-150	
			B2	24		12	F2	TERM	
G10-24		T	C2	1					
C7-1		T	D2	2					
G10-17		T	A3	15	R/W BYTES 0, 4 BIT 5	14	T3	PIC-153	
			B3	16		13	F3	TERM	
G10-1		T	C3	17					
C7-3		T	D3	18					
G13-20	G11-20		E1	20					
G13-19	G11-19		E0	19					
			IH	22					

12171 LOC: G13 NAME: RW2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G10-19		T	A1	3	R/W BYTES 0, 4 BIT 6	7	T1	PIC-170	
			B1	4		8	F1	TERM	
G10-22		T	C1	5					
C7-15		T	D1	6					
G10-20		T	A2	23	R/W BYTES 0, 4 BIT 7	11	T2	PIC-165	
			B2	24		12	F2	TERM	
G10-23		T	C2	1					
C7-17		T	D2	2					
G10-11		T	A3	15	R/W BYTES 0, 4 PARITY	14	T3	PIC-173	
			B3	16		13	F3	TERM	
G10-7		T	C3	17					
PIC-177		T	D3	18					
E13-11	G12-20		E1	20					
E13-23	G12-19		E0	19					
			IH	22					

REVISION RECORD

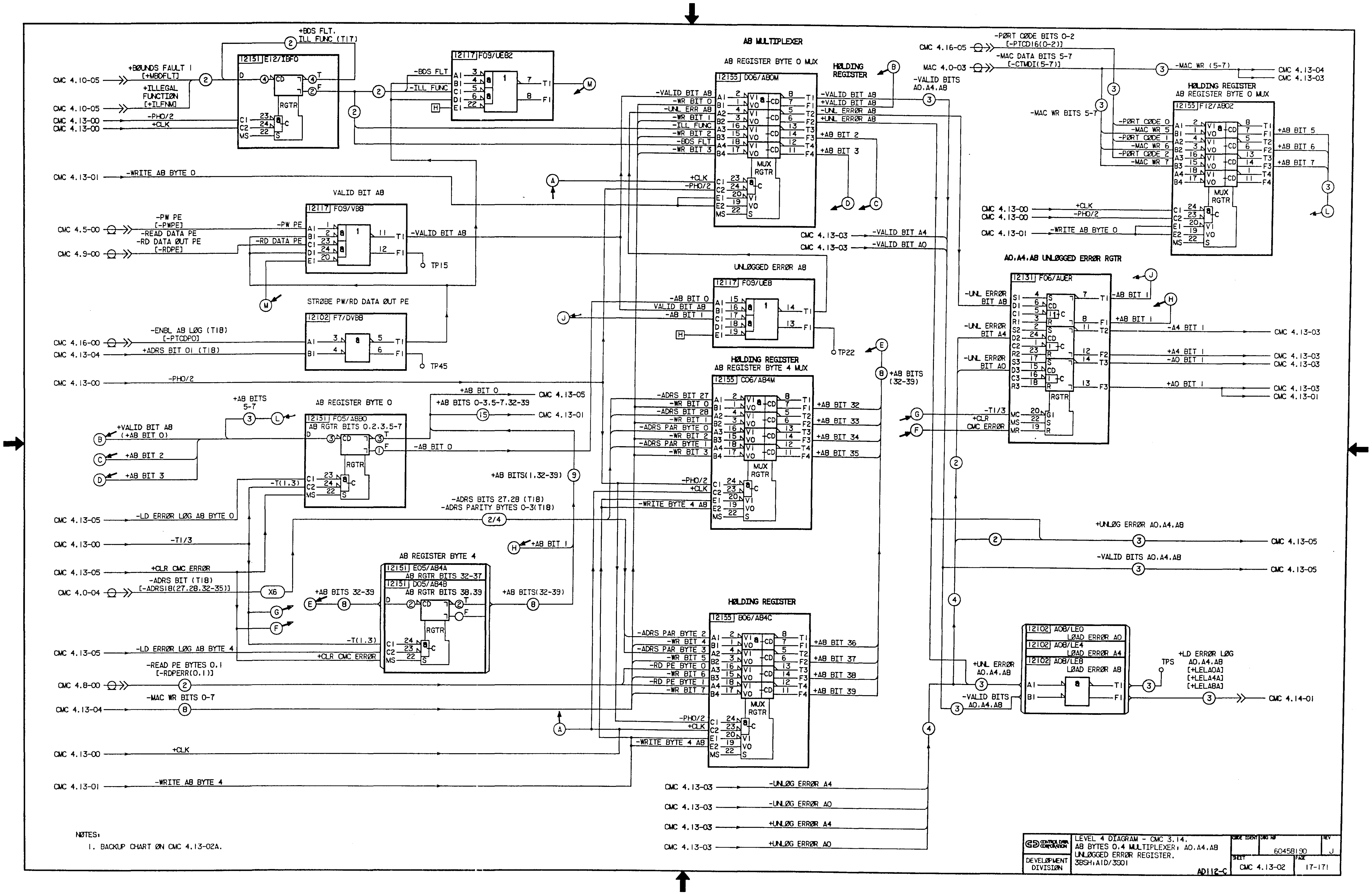
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.13-01
3BSH; AID/3301 AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.13-01B
17-170

24613176



NOTES:

1. BACKUP CHART ON CMC 4.13-02A.

CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM - CMC 3.14.
AB BYTES 0,4 MULTIPLEXER, A0,A4,AB
UNLOGGED ERROR REGISTER.
3BSH;AID/3S01

AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.13-02	17-171

REVISION RECORD

REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12151 LOC: F05 NAME: A8B0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D6-7		T	D1	17	A8 BIT 0	16	T1	G1-6	
						15	F1	F9-15	
D6-14		T	D2	18	A8 BIT 2	14	T2	F1-2	
						13	F2	TERM	
D6-11		T	D3	2	A8 BIT 3	3	T3	E1-6	
						4	F3	TERM	
F12-7		T	D4	1	A8 BIT 5	6	T4	D01-18	1
						5	F4	TERM	
F12-6		T	D5	19	A8 BIT 6	12	T5	C01-18	1
						11	F5	TERM	
F12-14		T	D6	20	A8 BIT 7	8	T6	G02-6	1
						7	F6	TERM	
B10-14		T	C1	23					
E5-24		T	C2	24					
E5-22	F6-19		MS	22					

12151 LOC: E12 NAME: IBF0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P23-21		T	D1	1	BOUNDS FLT T17	6	T1	E12-20	
						5	F1	TERM	
P28-07		T	D2	2	ILL FUNCTION T17	3	T2	E12-19	
						4	F2	TERM	
E12-6		T	D3	20	BOUNDS FLT T18	8	T3	TERM	
						7	F3	F09-3	
E12-3		T	D4	19	ILL FUNCTION T18	12	T4		
						11	F4	F09-5	
			D5	18		14	T5		
						13	F5		
			D6	17		16	TG		
						15	F6		
G06-5			C1	23					
F12-24		T	C2	24					
			MS	22					

12151 LOC: E05 NAME: A84A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C6-7		T	D1	2	A8 BIT 32	3	T1	G2-2	
						4	F1	TERM	
C6-6		T	D2	1	A8 BIT 33	6	T2	F2-18	
						5	F2	TERM	
C6-14		T	D3	20	A8 BIT 34	8	T3	E2-6	
						7	F3	TERM	
C6-11		T	D4	19	A8 BIT 35	12	T4	E2-2	
						11	F4	TERM	
B6-7		T	D5	18	A8 BIT 36	14	T5	D2-18	
						13	F5	TERM	
B6-6		T	D6	17	A8 BIT 37	16	T6	C2-6	
						15	F6	TERM	
D5-23		T	C1	23					
G9-12	F5-24		C2	24					
D5-22	F5-22		MS	22					

12151 LOC: D05 NAME: A84B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B6-14		T	D1	19	A8 BIT 38	12	T1	C2-2	
						11	F1	TERM	
B6-11		T	D2	20	A8 BIT 39	8	T2	C3-2	
						7	F2	TERM	
			D3	1		6	T3		
						5	F3		
			D4	2		3	T4		
						4	F4		
			D5	17		16	T5		
						15	F5		
			D6	18		14	T6		
						13	F6		
B11-14	E5-23		C1	23					
D9-24		T	C2	24					
A7-18	E5-22		MS	22					

12102 LOC: A08 NAME: LE0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B11-1		T	A1	1	LOAD ERROR A0	8	T1	TP-10	
E9-08	B10-2		B1	2		7	F1	P2A-6	

12102 LOC: A08 NAME: LE4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B11-3		T	A1	3	LOAD ERROR A4	5	T1	TP-11	
E8-07	B10-4		B1	4		6	F1	P2A-7	

12102 LOC: A08 NAME: LE8

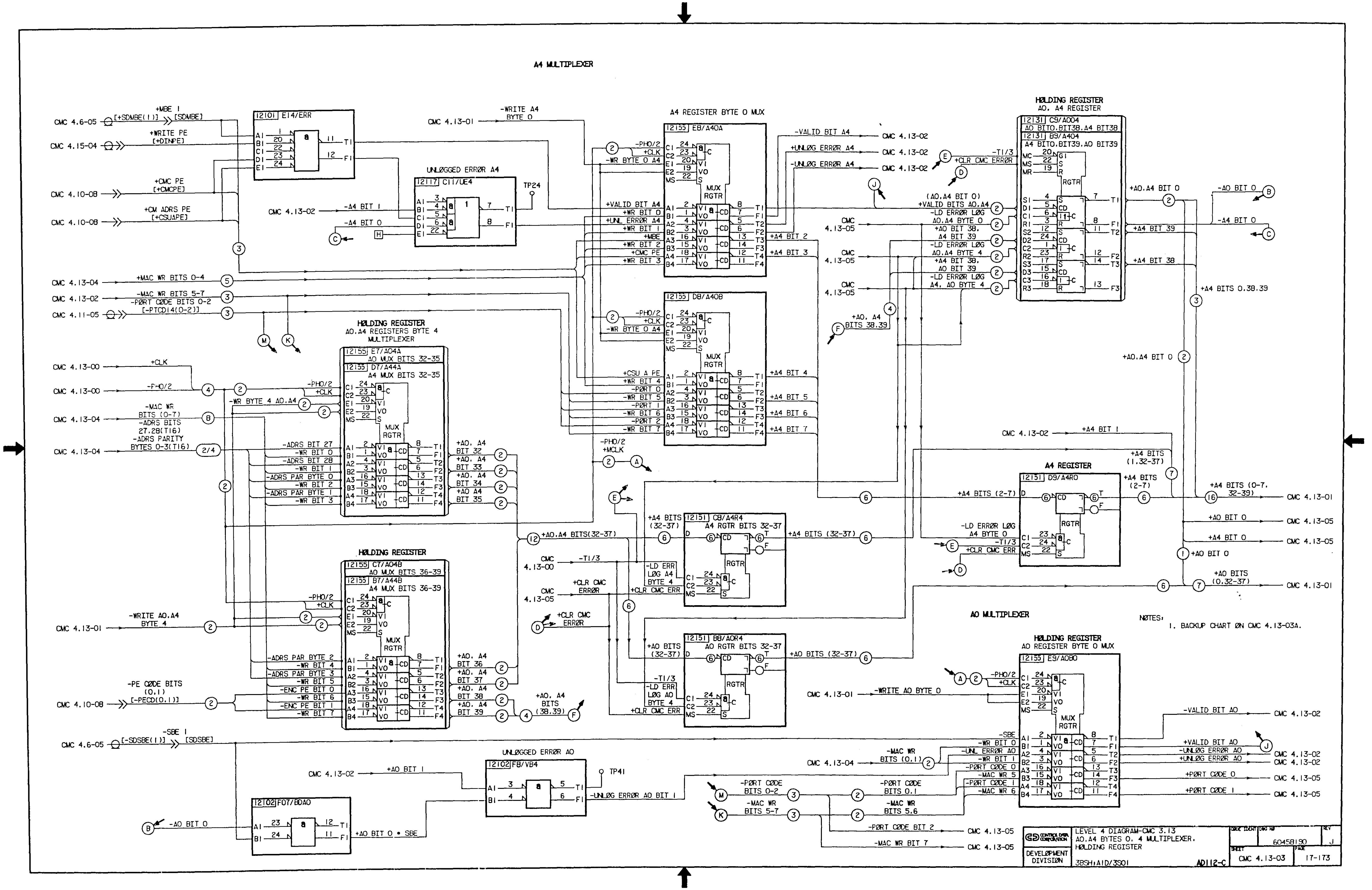
SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D6-6	B10-15		A1	23	LOAD ERROR A8	12	T1	TP-9	
D06-08	B10-16		B1	24		11	F1	P2A-8	

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.13-02
38SH; AID/3301 AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.13-02A
17-172

24613176



NOTES:
1. BACKUP CHART ØN CMC 4.13-03A.

CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CMC 3.13
A0.A4 BYTES 0. 4 MULTIPLEXER.
HØLDING REGISTER

3BSH:A1D/3S01

AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.13-03	17-173

12155 LOC: E7 NAME: A04A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D7-2	B2-3		A1	2	A0 MUX	8	T1	TERM	
D7-1	G11-6		B1	1	BIT 32	7	F1	B8-2	
D7-4	B2-17		A2	4	A0 MUX	5	T2	TERM	
D7-3	G11-2		B2	3	BIT 33	6	F2	B8-1	
C14-12	D7-16		A3	16	A0 MUX	13	T3	TERM	
D7-15	G11-18		B3	15	BIT 34	14	F3	B8-20	
C14-11	D7-18		A4	18	A0 MUX	12	T4	TERM	
D7-17	G12-6		B4	17	BIT 35	11	F4	B8-19	
G6-4	D7-24		C1	24					
D7-23	E8-23		C2	23					
E7-19		T	E1	20					
C7-20	E7-20		E2	19					
			MS	22					

12155 LOC: C7 NAME: A04B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C14-8	B7-2		A1	2	A0 MUX	8	T1	TERM	
B7-1	G12-2		B1	1	BIT 36	7	F1	B8-18	
C14-7	B7-4		A2	4	A0 MUX	5	T2	TERM	
B7-3	G12-18		B2	3	BIT 37	6	F2	B8-17	
			A3	16	A0 MUX	13	T3	TERM	
B7-15	G13-6		B3	15	BIT 38	14	F3	C9-24	
			A4	18	A0 MUX	12	T4	TERM	
B7-17	G13-2		B4	17	BIT 39	11	F4	B9-15	
D7-24	B7-24		C1	24					
B7-23		T	C2	23					
C7-19	E7-19		E1	20					
B11-23	C7-20		E2	19					
			MS	22					

12151 LOC: B8 NAME: A0R4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E7-7		T	D1	2	A0	3	T1	G2-24	
					BIT 32	4	F1	TERM	
E7-6		T	D2	1	A0	6	T2	F2-16	
					BIT 33	5	F2	TERM	
E7-14		T	D3	20	A0	8	T3	E2-4	
					BIT 34	7	F3	TERM	
E7-11		T	D4	19	A0	12	T4	E2-24	
					BIT 35	11	F4	TERM	
C7-7		T	D5	18	A0	14	T5	D2-16	
					BIT 36	13	F5	TERM	
C7-6		T	D6	17	A0	16	T6	C2-4	
					BIT 37	15	F6	TERM	
C8-24		T	C1	24					
B9-16		T	C2	23					
B9-22	C8-22		MS	22					

12155 LOC: D7 NAME: A44A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B14-11	E7-2		A1	2	A4 MUX	8	T1	TERM	
D10-1	E7-1		B1	1	BIT 32	7	F1	C8-2	
B14-12	E7-4		A2	4	A4 MUX	5	T2	TERM	
D10-8	E7-3		B2	3	BIT 33	6	F2	C8-1	
E7-16	B1-1		A3	16	A4 MUX	13	T3	TERM	
D10-12	E7-15		B3	15	BIT 34	14	F3	C8-20	
E7-18	B1-3		A4	18	A4 MUX	12	T4	TERM	
D10-18	E7-17		B4	17	BIT 35	11	F4	C8-19	
E7-24	C7-24		C1	24					
G8-7	E7-23		C2	23					
D7-19		T	E1	20					
B7-20	D7-20		E2	19					
			MS	22					

12155 LOC: B7 NAME: A44B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C7-2	B1-17		A1	2	A4 MUX	8	T1	TERM	
C10-1	C7-1		B1	1	BIT 36	7	F1	C8-18	
C7-4	B1-19		A2	4	A4 MUX	5	T2	TERM	
C10-8	C7-3		B2	3	BIT 37	6	F2	C8-17	
P2B-33		T	A3	16	A4 MUX	13	T3	TERM	
C10-12	C7-15		B3	15	BIT 38	14	F3	C9-15	
P2B-35		T	A4	18	A4 MUX	12	T4	TERM	
C10-17	C7-17		B4	17	BIT 39	11	F4	B9-24	
C7-24		T	C1	24					
D8-23	C7-23		C2	23					
B7-19	D7-19		E1	20					
B11-5	B7-20		E2	19					
			MS	22					

12131 LOC: C9 NAME: A004

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			S1	4		7	T1	A09-1	
E9-7		T	D1	6	A0	8	F1	F7-23	
B10-11	G14-23		C1	5	BIT 0				
			R1	3					
			S2	2		11	T2		
C7-14		T	D2	24	A0	12	F2	TERM	
B11-11	B9-16		C2	1	BIT 38				
			R2	23					
			S3	17		14	T3	C2-1	
B7-14		T	D3	15	A4	13	F3	TERM	
B9-1	C8-23		C3	16	BIT 38				
			R3	18					
G9-17		T	MC	20					
D9-22	B9-22		MS	22					
			MR	19					

12151 LOC: C8 NAME: A4R4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D7-7		T	D1	2	A4	3	T1	G2-1	
					BIT 32	4	F1	TERM	
D7-6		T	D2	1	A4	6	T2	F2-17	
					BIT 33	5	F2	TERM	
D7-14		T	D3	20	A4	8	T3	E2-5	
					BIT 34	7	F3	TERM	
D7-11		T	D4	19	A4	12	T4	E2-1	
					BIT 35	11	F4	TERM	
B7-7		T	D5	18	A4	14	T5	D2-17	
					BIT 36	13	F5	TERM	
B7-6		T	D6	17	A4	16	T6	C2-5	
					BIT 37	15	F6	TERM	
G9-8	B8-24		C1	24					
C9-16		T	C2	23					
B8-22		T	MS	22					

12131 LOC: B9 NAME: A404

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			S1	4		7	T1	D11-24	
E8-8		T	D1	6	A4	8	F1	C11-6	
B10-7	D9-23		C1	5	BIT 0				
			R1	3					
			S2	2		11	T2	C3-1	
B7-11		T	D2	24	A4	12	F2	TERM	
B11-7	C9-16		C2	1	BIT 39				
			R2	23					
			S3	17		14	T3		
C7-11		T	D3	15	A0	13	F3		
C9-1	B8-23		C3	16	BIT 39				
			R3	18					
G9-18		T	MC	20					
C9-22	B8-22		MS	22					
			MR	19					

12151 LOC: D8 NAME: A4R0

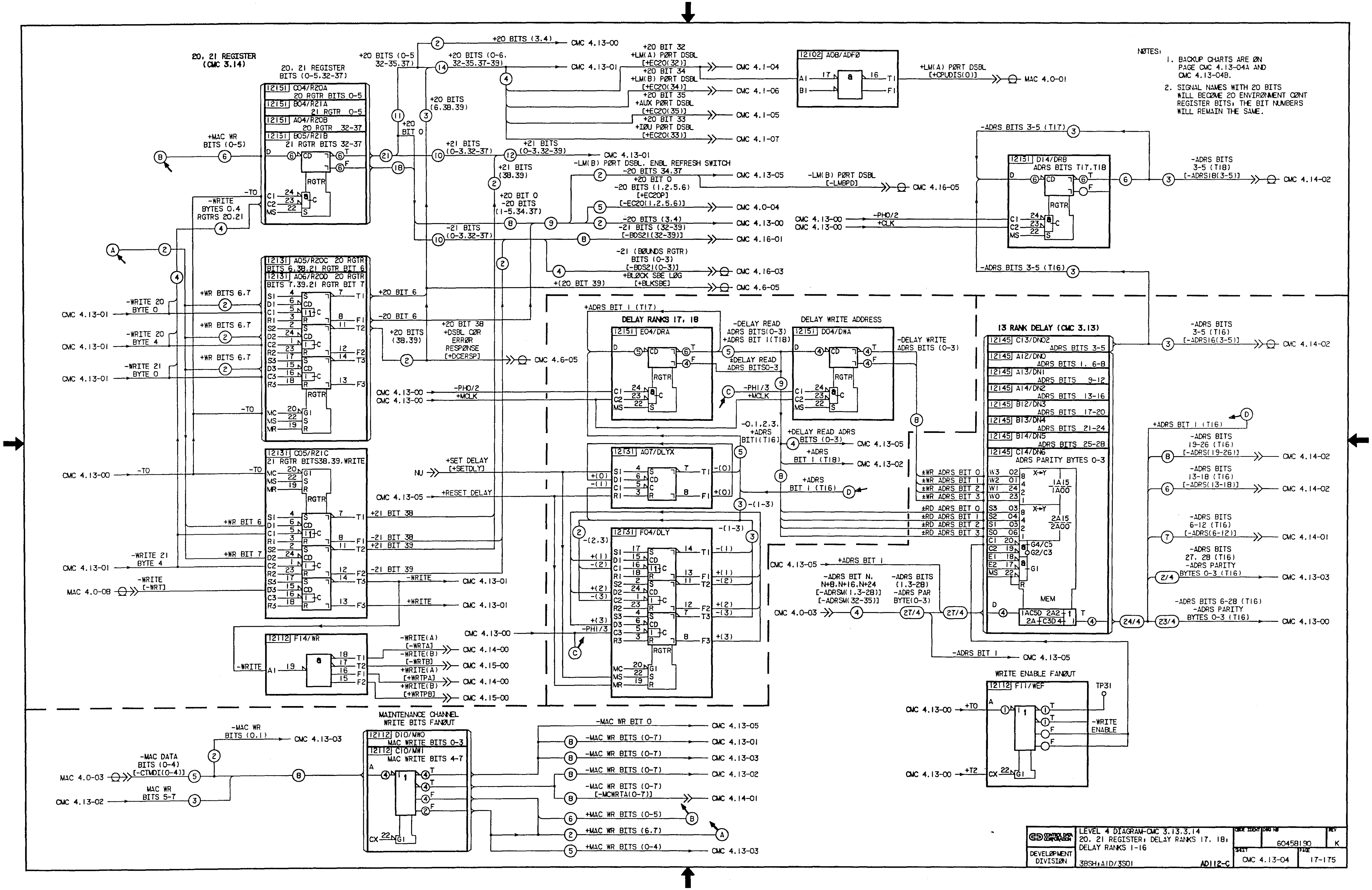
SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E8-13		T	D1	2	A4	3	T1	F1-1	
					BIT 2	4	F1	TERM	
E8-12		T	D2	1	A4	6	T2	E1-5	
					BIT 3	5	F2	TERM	
D8-8		T	D3	20	A4	8	T3	D1-1	
					BIT 4	7	F3	TERM	
D8-6		T	D4	19	A4	12	T4	D1-17	
					BIT 5	11	F4	TERM	
D8-14		T	D5	18	A4	14	T5	C1-17	
					BIT 6	13	F5	TERM	
D8-11		T	D6	17	A4	16	T6	G2-5	
					BIT 7	15	F6	TERM	
B8-5		T	C1	23					
G9-11	D5-24		C2	24					
C12-4	C9-22		MS	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.13-03
38SH; AID/3501 AD112-C

CODE IDENT 34010 D
DWG NO 60458190
REV J
SHEET CMC 4.13-03A 17-174

24613176


20, 21 REGISTER (CMC 3.14)
20, 21 REGISTER BITS (0-5,32-37)
C04/R20A 20 RGTR BITS 0-5
B04/R21A 21 RGTR 0-5
A04/R20B 20 RGTR 32-37
B05/R21B 21 RGTR BITS 32-37
+MAC WR BITS (0-5)
-WRITE BYTES 0,4 RGTRS 20,21
A05/R20C 20 RGTR BITS 6,38,21 RGTR BIT 6
A06/R20D 20 RGTR BITS 7,39,21 RGTR BIT 7
-WRITE 20 BYTE 0
-WRITE 20 BYTE 4
-WRITE 21 BYTE 0
+WR BITS 6,7
C05/R21C 21 RGTR BITS38,39,WRITE
-WRITE 21 BYTE 4
-WRITE [-WRT]
+WR BIT 6
+WR BIT 7
F14/WR
-WRITE(A) [-WRTA]
-WRITE(B) [-WRTB]
+WRITE(A) [+WRTPA]
+WRITE(B) [+WRTPB]
+20 BITS (3,4)
+20 BITS (0-5, 32-35,37)
+20 BITS (0-6, 32-35,37-39)
+20 BIT 32 +LM(A) PORT DSBL [+EC20(32)]
+20 BIT 34 +LM(B) PORT DSBL [+EC20(34)]
+20 BIT 35 +AUX PORT DSBL [+EC20(35)]
+20 BIT 33 +IOU PORT DSBL [+EC20(33)]
A08/ADF0
+LM(A) PORT DSBL [+CPUDIS(0)]
+21 BITS (0-3,32-37)
+21 BITS (0-3,32-39)
-LM(B) PORT DSBL, ENBL REFRESH SWITCH
-20 BITS 34,37
+20 BIT 0
-20 BITS (1,2,5,6) [+EC20P] [-EC20(1,2,5,6)]
-20 BITS (3,4)
-21 BITS (32-39) [-BDS21(32-39)]
-21 (BOUNDS RGTR) BITS (0-3) [-BDS21(0-3)]
+BLOCK SBE LOG [+BLKSBE]
+(20 BIT 39)
-LM(B) PORT DSBL [-LMBPD]
+20 BIT 38 +DSBL COR ERROR RESPONSE [+DCERSP]
D14/DRB ADRS BITS T17,T18
-ADRS BITS 3-5 (T17)
-ADRS BITS 3-5 (T18) [-ADRS18(3-5)]
-ADRS BITS 3-5 (T16)
-PH0/2 +CLK
DELAY RANKS 17, 18
E04/DRA
DELAY WRITE ADDRESS
D04/DWA
-DELAY READ ADRS BITS(0-3) +ADRS BIT 1(T18)
±DELAY READ ADRS BITS0-3
-DELAY WRITE ADRS BITS (0-3)
-PH1/3 +MCLK
+SET DELAY [+SETDLY]
+RESET DELAY
A07/DLYX
F04/DLY
+DELAY READ ADRS BITS (0-3)
+ADRS BIT 1 (T18)
+ADRS BIT 1 (T16)
13 RANK DELAY (CMC 3.13)
C13/DN02 ADRS BITS 3-5
A12/DN0 ADRS BITS 1, 6-8
A13/DN1 ADRS BITS 9-12
A14/DN2 ADRS BITS 13-16
B12/DN3 ADRS BITS 17-20
B13/DN4 ADRS BITS 21-24
B14/DN5 ADRS BITS 25-28
C14/DN6 ADRS PARITY BYTES 0-3
±WR ADRS BIT 0-3
±RD ADRS BIT 0-3
MEM
-ADRS BITS 19-26 (T16) [-ADRS(19-26)]
-ADRS BITS 13-18 (T16) [-ADRS(13-18)]
-ADRS BITS 6-12 (T16) [-ADRS(6-12)]
-ADRS BITS 27, 28 (T16) -ADRS PARITY BYTES 0-3 (T16)
-ADRS BITS 6-28 (T16) -ADRS PARITY BYTES 0-3 (T16)
-ADRS BIT N, N+8,N+16,N+24 [-ADRSM(1,3-28)] [-ADRSM(32-35)]
-ADRS BITS (1,3-28) -ADRS PAR BYTE(0-3)
-ADRS BIT 1
WRITE ENABLE FANOUT
F11/WEF
TP31
-WRITE ENABLE
MAINTENANCE CHANNEL WRITE BITS FANOUT
D10/MW0 MAC WRITE BITS 0-3
C10/MW1 MAC WRITE BITS 4-7
-MAC WR BITS (0,1)
-MAC DATA BITS (0-4) [-CTMDI(0-4)]
MAC WR BITS 5-7
-MAC WR BIT 0
-MAC WR BITS (0-7) [-MCWRTA(0-7)]
+MAC WR BITS (0-5)
+MAC WR BITS (6,7)
+MAC WR BITS (0-4)
CMC 4.13-00
CMC 4.13-01
CMC 4.13-02
CMC 4.13-03
CMC 4.13-05
CMC 4.1-04
CMC 4.1-05
CMC 4.1-06
CMC 4.1-07
CMC 4.0-04
CMC 4.16-01
CMC 4.16-03
CMC 4.16-05
CMC 4.6-05
CMC 4.14-00
CMC 4.14-01
CMC 4.14-02
CMC 4.15-00
CMC 4.0-03
MAC 4.0-01
MAC 4.0-03
MAC 4.0-08

NOTES:

1. BACKUP CHARTS ARE ON PAGE CMC 4.13-04A AND CMC 4.13-04B.
2. SIGNAL NAMES WITH 20 BITS WILL BECOME 20 ENVIRONMENT CONT REGISTER BITS, THE BIT NUMBERS WILL REMAIN THE SAME.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.13,3.14 20, 21 REGISTER, DELAY RANKS 17, 18, DELAY RANKS 1-16	CODE IDENT	DWG NO 60458190	REV K
DEVELOPMENT DIVISION	3BSH,A1D/3S01 AD112-C	SHEET CMC 4.13-04		PAGE 17-175

12151 LOC: C04 NAME: R20A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D10-3	B4-1		D1	1	20	6	T1	G1-2	
					BIT 0	5	F1	TERM	
D10-6	B4-2		D2	2	20	3	T2	G1-18	
					BIT 1	4	F2	PIA-02	
D10-13	B4-20		D3	20	20	8	T3	F1-18	
					BIT 2	7	F3	PIA-03	
D10-16	B4-19		D4	19	20	12	T4	F8-18	
					BIT 3	11	F4	F7-19	
C10-3	B4-18		D5	18	20	14	T5	E1-18	
					BIT 4	13	F5	F7-20	
C10-6	B4-17		D6	17	20	16	T6	D1-6	
					BIT 5	15	F6	PIA-04	
G5-11	A4-24		C1	24					
A5-5		T	C2	23					
			MS	22					

12151 LOC: B04 NAME: R21A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C4-1	B5-1		D1	1	21	6	T1	G1-3	
					BIT 0	5	F1	PIC-16	
C4-2	B5-2		D2	2	21	3	T2	F1-3	
					BIT 1	4	F2	PIC-28	
C4-20	B5-20		D3	20	21	8	T3	F1-23	
					BIT 2	7	F3	PIC-40	
C4-19	B5-19		D4	19	21	12	T4	E1-3	
					BIT 3	11	F4	PIC-39	
C4-18	B5-18		D5	18	21	14	T5		
					BIT 4	13	F5		
C4-17	B5-17		D6	17	21	16	T6		
					BIT 5	15	F6		
G5-12	B5-24		C1	24					
A5-16		T	C2	23					
			MS	22					

12151 LOC: A04 NAME: R20B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B5-1		T	D1	1	20	6	T1	G2-18	
					BIT 32	5	F1	TERM	
B5-2		T	D2	2	20	3	T2	F2-6	
					BIT 33	4	F2	TERM	
B5-20		T	D3	20	20	8	T3	F2-2	
					BIT 34	7	F3	PIC-113	
B5-19		T	D4	19	20	12	T4	E2-18	
					BIT 35	11	F4	TERM	
B5-18		T	D5	18	20	14	T5		
					BIT 36	13	F5		
B5-17		T	D6	17	20	16	T6	D2-2	
					BIT 37	15	F6	A08-20	
C4-24		T	C1	24					
A5-1		T	C2	23					
			MS	22					

12151 LOC: B05 NAME: R21B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B4-1	A4-1		D1	1	21	6	T1	G2-23	
					BIT 32	5	F1	P2A-19	
B4-2	A4-2		D2	2	21	3	T2	F2-15	
					BIT 33	4	F2	P2A-20	
B4-20	A4-20		D3	20	21	8	T3	E2-3	
					BIT 34	7	F3	P2A-21	
B4-19	A4-19		D4	19	21	12	T4	E2-23	
					BIT 35	11	F4	P2A-22	
B4-18	A4-18		D5	18	21	14	T5	D2-15	
					BIT 36	13	F5	P2A-23	
B4-17	A4-17		D6	17	21	16	T6	C2-3	
					BIT 37	15	F6	P2A-24	
B4-24		T	C1	24					
C5-1		T	C2	23					
			MS	22					

12131 LOC: A05 NAME: R20C

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			S1	4	20 BIT 6	7	T1	C1-6	
A5-15		T	D1	6		8	F1	PIA-06	
A6-5	C4-23		C1	5					
			R1	3					
			S2	2	20 BIT 38	11	T2	C2-18	
C5-6		T	D2	24		12	F2	TERM	
A6-1	A4-23		C2	1					
			R2	23					
			S3	17	21 BIT 6	14	T3		
C10-13	A5-6		D3	15		13	F3		
A6-16	B4-23		C3	16					
			R3	18					
G5-1		T	MC	20					
			MS	22					
			MR	19					

12131 LOC: A06 NAME: R20D

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			S1	4	20 BIT 7	7	T1		
A6-15		T	D1	6		8	F1		
D12-6	A5-5		C1	5					
			R1	3					
			S2	2	20 BIT 39	11	T2	C3-6	
C5-24		T	D2	24		12	F2	TERM	
D13-6	A5-1		C2	1					
			R2	23					
			S3	17	21 BIT 7	14	T3		
C10-16	A6-6		D3	15		13	F3		
D12-11	A5-16		C3	16					
			R3	18					
G5-2		T	MC	20					
			MS	22					
			MR	19					

12151 LOC: E04 NAME: DRA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A7-7		T	D1	17	RD ADRS	16	T1	D4-17	
					BIT 0	15	F1	E11-17	
F4-14	A7-5		D2	2	RD ADRS	3	T2	D4-2	
					BIT 1	4	F2	E11-2	
F4-16		T	D3	20	RD ADRS	8	T3	D4-1	
					BIT 2	7	F3	E11-1	
F4-1		T	D4	19	RD ADRS	12	T4	D4-19	
					BIT 3	11	F4	E11-19	
A12-12		T	D5	1	ADRS	6	T5	E04-18	
					BIT 1 (T17)	5	F5	TERM	
E4-6		T	D6	18	ADRS	14	T6	F7-4	
					BIT 1 (T18)	13	F6	TERM	
G6-15		T	C1	24					
D4-23		T	C2	23					
			MS	22					

12151 LOC: D04 NAME: DWA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E4-16	B12-3		D1	17	WRT ADRS	16	T1	B12-2	
					BIT 0	15	F1	C13-2	
E4-3	B12-4		D2	2	WRT ADRS	3	T2	B12-1	
					BIT 1	4	F2	A14-1	
E4-8	B12-5		D3	1	WRT ADRS	6	T3	A11-24	
					BIT 2	5	F3	C14-24	
E4-12	A11-6		D4	19	WRT ADRS	12	T4	A11-23	
					BIT 3	11	F4	A14-23	
			D5	18		14	T5		
						13	F5		
			D6	20		8	T6		
						7	F6		
F8-7	F4-5		C1	24					
G8-2	E4-23		C2	23					
			MS	22					

12145 LOC: A12 NAME: DN0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F14-13		T	D3	13	BIT 1	12	T3	E4-1	
P1B-02		T	D2	14	BIT 6	11	T2	A3-19	
P1B-03		T	D1	15	BIT 7	8	T1	A3-1	
P1B-04		T	D0	16	BIT 8	7	T0	A3-3	
A13-2		T	W3	2					
A13-1		T	W2	1					
D4-6	A13-24		W1	24					
D4-12	A13-23		W0	23					
A13-3		T	S3	3					
A13-4		T	S2	4					
A13-5	A11-5	T	S1	5					
D4-19	A13-6		S0	6					
B12-20		T	C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: A13 NAME: DN1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-06		T	D3	13	BIT 9	12	T3	A3-17	
P1B-07		T	D2	14	BIT 10	11	T2	A3-23	
P1B-08		T	D1	15	BIT 11	8	T1	A2-23	
P1B-09		T	D0	16	BIT 12	7	T0	A2-3	
B13-2	A12-2		W3	2					
B13-1	A12-1		W2	1					
A12-24	B13-24		W1	24					
A12-23	B13-23		W0	23					
B13-3	A12-3		S3	3					
B13-4	A12-4		S2	4					
B13-5	A12-5		S1	5					
A12-6	B13-6		S0	6					
B13-20		T	C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: A14 NAME: DN2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-10		T	D3	16	BIT 13	7	T3	A2-17	
P1B-11		T	D2	15	BIT 14	8	T2	A2-1	
P1B-12		T	D1	14	BIT 15	11	T1	A2-19	
P1B-13		T	D0	13	BIT 16	12	T0	A1-17	
B14-2		T	W3	2					
D4-4	B14-1		W2	1					
B14-24		T	W1	24					
D4-11	B14-23		W0	23					
B14-3		T	S3	3					
B14-4		T	S2	4					
B14-5		T	S1	5					
B14-6		T	S0	6					
F11-4	B14-20		C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: B12 NAME: DN3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-14		T	D3	13	BIT 17	12	T3	A1-3	
P1B-15		T	D2	14	BIT 18	11	T2	A1-1	
P1B-17		T	D1	15	BIT 19	8	T1	A1-19	
P1B-18		T	D0	16	BIT 20	7	T0	A1-23	
D04-16	B13-2		W3	2					
D04-3	B13-1		W2	1					
B13-24		T	W1	24					
B13-23		T	W0	23					
D04-17	B13-3		S3	3					
D4-2	B13-4		S2	4					
D4-1	B13-5		S1	5					
B13-6		T	S0	6					
F11-6	A12-20		C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: B13 NAME: DN4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-19		T	D3	13	BIT 21	12	T3	B3-1	
P1B-20		T	D2	14	BIT 22	11	T2	B3-3	
P1B-21		T	D1	15	BIT 23	8	T1	B3-17	
P1B-22		T	D0	16	BIT 24	7	T0	B3-19	
B12-2	A13-2		W3	2					
B12-1	A13-1		W2	1					
A13-24	B12-24		W1	24					
A13-23	B12-23		W0	23					
B12-3	A13-3		S3	3					
B12-4	A13-4		S2	4					
B12-5	A13-5		S1	5					
A13-6	B12-6		S0	6					
F11-5	A13-20		C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: B14 NAME: DN5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-23		T	D3	16	BIT 25	7	T3	B3-23	
P1B-24		T	D2	15	BIT 26	8	T2	B2-1	
P1B-26		T	D1	14	BIT 27	11	T1	D7-2	
P1B-27		T	D0	13	BIT 28	12	T0	D7-4	
C14-2	A14-2		W3	2					
A14-1	C14-1		W2	1					
C14-24	A14-24		W1	24					
A14-23	C14-23		W0	23					
C14-3	A14-3		S3	3					
C14-4	A14-4		S2	4					
C14-5	A14-5		S1	5					
C14-6	A14-6		S0	6					
A14-20		T	C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12145 LOC: C14 NAME: DN6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-28		T	D3	13	PAR 0	12	T3	E7-16	
P1B-29		T	D2	14	PAR 1	11	T2	E7-18	
P1B-30		T	D1	15	PAR 2	8	T1	C7-2	
P1B-31		T	D0	16	PAR 3	7	T0	C7-4	
C13-2	B14-2		W3	2					
B14-1	C13-1		W2	1					
C13-24	B14-24		W1	24					
B14-23	C13-23		W0	23					
C13-3	B14-3		S3	3					
C13-4	B14-4		S2	4					
C13-5	B14-5		S1	5					
C13-6	B14-6		S0	6					
F11-3		T	C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.13-04
3BSH: AID/3S01 A0112-C

CODE IDENT 34010 D
DWG NO 60458190
REV K
SHEET CMC 4.13-04A 17-176

24613176

12112 LOC: F11 NAME: WEF

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-3	F11-23		A1	24	WRITE ENABLE	1	T1	TP-31	
						2	T2	TERM	
						3	F1	C14-20	
						4	F2	A14-20	
F11-24	F11-20		A2	23	WRITE ENABLE	8	T3	TERM	
						7	T4	TERM	
						6	F3	B12-20	
						5	F4	B13-20	
F11-23 .		T	A3	20	WRITE ENABLE	11	T5	TERM	
						12	T6		
						13	F5	C14-20	
						14	F6		
			A4	19		18	T7		
						17	T8		
						16	F7		
						15	F8		
G8-13		T	CX	22	-T2				

12112 LOC: D10 NAME: MW0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-130	E9-1		A1	24	MAC WRITE BIT 0	1	T1	D7-1	
						2	T2	D6-1	
						3	F1	C4-1	
						4	F2	E8-1	
PIC-129	E9-3		A2	23	MAC WRITE BIT 1	8	T3	D7-3	
						7	T4	D6-3	
						6	F3	C4-2	
						5	F4	E8-3	
PIC-134		T	A3	20	MAC WRITE BIT 2	12	T5	D7-15	
						11	T6	D6-15	
						13	F5	C4-20	
						14	F6	E8-15	
PIC-118		T	A4	19	MAC WRITE BIT 3	18	T7	D7-17	
						17	T8	D6-17	
						16	F7	C4-19	
						15	F8	E8-17	
			CX	22					

12112 LOC: C10 NAME: MW1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-137		T	A1	24	MAC WRITE BIT 4	1	T1	B7-1	
						2	T2	B6-1	
						3	F1	C4-18	
						4	F2	D8-1	
F12-1	D08-3		A2	23	MAC WRITE BIT 5	8	T3	B7-3	
						7	T4	B6-3	
						6	F3	C4-17	
						5	F4	TERM	
F12-3	D08-15		A3	20	MAC WRITE BIT 6	12	T5	B7-15	
						11	T6	B6-15	
						13	F5	A5-15	
						14	F6	C5-6	
F12-15	D08-17		A4	19	MAC WRITE BIT 7	17	T7	B7-17	
						18	T8	B6-17	
						16	F7	A6-15	
						15	F8	C05-24	
			CX	22					

NOTES: 1. LOGIC ON CMC 4.13-04

12117 LOC: B10 NAME: LD00

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E9-6	B11-1		A1	1	LOAD ERROR LOG A0 BYTE 0	11	T1	C9-5	
A8-2	B11-2		B1	2		12	F1	TP-19	
C11-18	E9-19, 20		C1	23					
			D1	24					
HI			E1	20					

12117 LOC: B10 NAME: LD40

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E8-5	B11-3		A1	3	LOAD ERROR LOG A4 BYTE 0	7	T1	B9-5	
A8-4	B11-4		B1	4		8	F1	TP-18	
C11-16	D8-19, 20		C1	5					
			D1	6					
HI			E1	22					

12117 LOC: B10 NAME: LD80

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A8-23	B11-15		A1	15	LOAD ERROR LOG A8 BYTE 0	14	T1	F5-23	
A8-24	B11-16		B1	16		13	F1	TP-21	
C11-19	D6-19, 20		C1	17					
			D1	18					
HI			E1	19					

12117 LOC: B11 NAME: LD04

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B10-1	A8-1		A1	1	LOAD ERROR LOG A0 BYTE 4	11	T1	C9-1	
B10-2		T	B1	2		12	F1	TP-28	
D13-13	C7-19, 20		C1	23					
			D1	24					
HI			E1	20					

12117 LOC: B11 NAME: LD44

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B10-3	A8-3		A1	3	LOAD ERROR LOG A4 BYTE 4	7	T1	B9-1	
B10-4		T	B1	4		8	F1	TP-26	
D13-14	B7-19, 20		C1	5					
			D1	6					
HI			E1	22					

12117 LOC: B11 NAME: LD84

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B10-15		T	A1	15	LOAD ERROR LOG A8 BYTE 4	14	T1	D5-23	
B10-16		T	B1	16		13	F1	TP-29	
D13-12	B6-19, 20		C1	17					
			D1	18					
HI			E1	19					

12151 LOC: A9 NAME: ESR

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D11-12		T	D1	2	00 BIT 61	3	T1	P2A-12	
						4	F1	TP-13	
C9-7	G1-04		D2	1	00 BIT 62	6	T2	P2A-11	
						5	F2	TP-12	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
G9-1		T	C1	24					
			C2	23					
D11-13		T	MS	22					

NOTES: 1. LOGIC ON CMC 4.13-05

12145 LOC: C13 NAME: DN02

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-05		T	D3	13	BIT 3	12	T3	D14-1	1
P2B-16		T	D2	14	BIT 4	11	T2	D14-2	
P1B-05		T	D1	15	BIT 5	8	T1	D14-20	1
			D0	16	NU	7	T0		
D4-15	C14-2		W3	2					
C14-1		T	W2	1					
D04-5	C14-24		W1	24					
C14-23		T	W0	23					
E11-17	C14-3		S3	3					
E11-2	C14-4		S2	4					
E11-1	C14-5		S1	5					
E11-19	C14-6		S0	6					
F11-13		T	C1	20					
			C2	19					
			E1	18					
			E2	17					
			MS	22					

12151 LOC: D14 NAME: DRB

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-12	PIC-75		D1	1	ADRS (3) T17	6	T1	D14-19	
						5	F1	TERM	
C13-11	PIC-79		D2	2	ADRS (4) T17	3	T2	D14-18	
						4	F2	TERM	
C13-8	PIC-72		D3	20	ADRS (5) T17	8	T3	D14-17	
						7	F3	TERM	
D14-6		T	D4	19	ADRS (3) T18	12	T4	PIC-84	
						11	F4	TERM	
D14-3		T	D5	18	ADRS (4) T18	14	T5	PIC-92	
						13	F5	TERM	
D14-8		T	D6	17	ADRS (5) T18	16	T6	PIC-83	
						15	F6	TERM	
F7-16	D8-24	T	C1	24					
E12-24	D8-23	T	C2	23					
			MS	22					

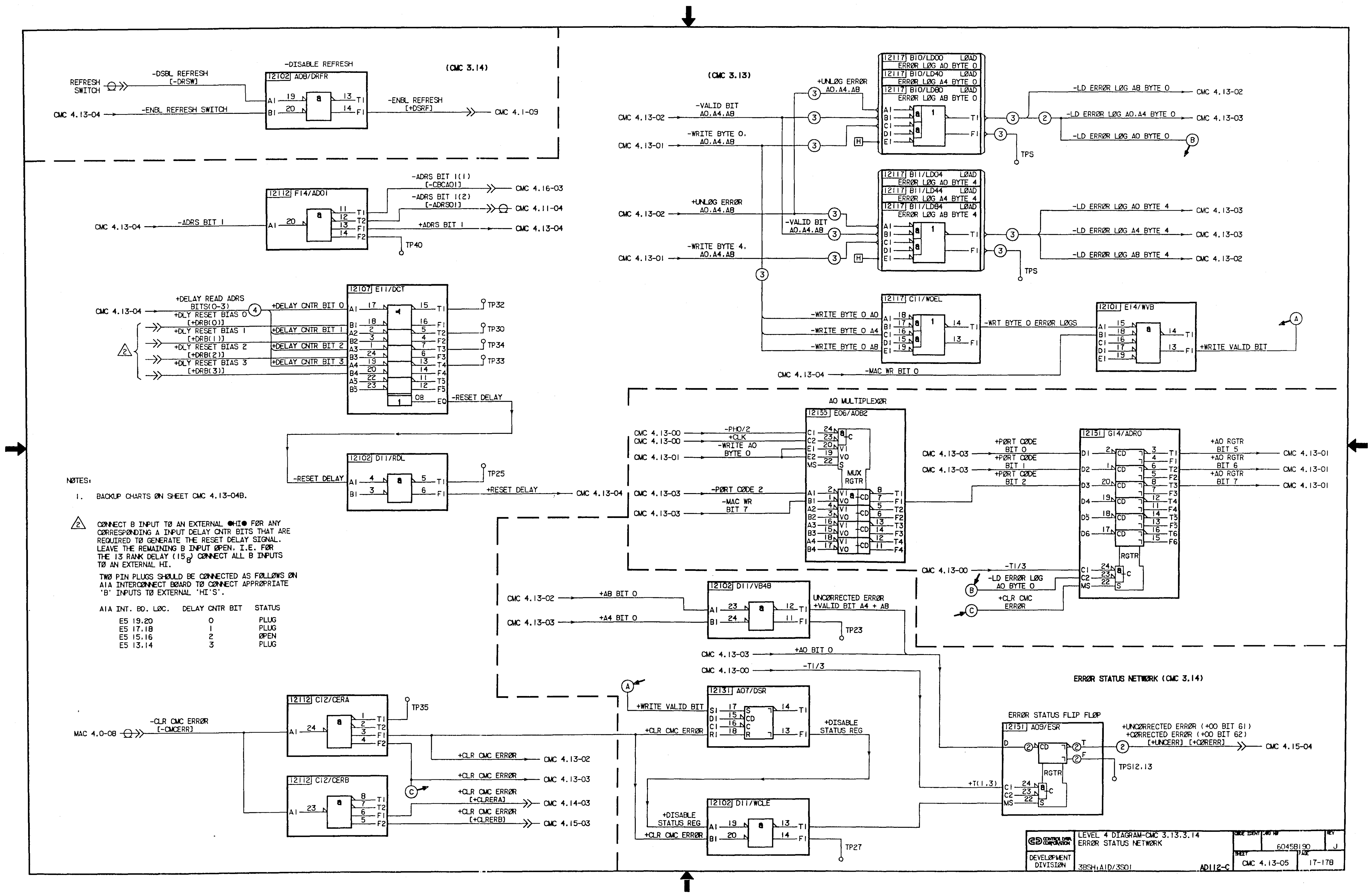
NOTE: LOGIC ON PAGE CMC 4.13-04

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.13-04,4.13-05
3B3H; AID/3301 AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.13-04B
17-177

24613176



NOTES:

1. BACKUP CHARTS ON SHEET CMC 4.13-04B.

⚠2 CONNECT B INPUT TO AN EXTERNAL ●HI● FOR ANY CORRESPONDING A INPUT DELAY CNTR BITS THAT ARE REQUIRED TO GENERATE THE RESET DELAY SIGNAL. LEAVE THE REMAINING B INPUT OPEN, I.E. FOR THE 13 RANK DELAY (15_8) CONNECT ALL B INPUTS TO AN EXTERNAL HI.

TWO PIN PLUGS SHOULD BE CONNECTED AS FOLLOWS ON A1A INTERCONNECT BOARD TO CONNECT APPROPRIATE 'B' INPUTS TO EXTERNAL 'HI'S'.

A1A INT. BD. LOC.	DELAY CNTR BIT	STATUS
E5 19.20	0	PLUG
E5 17.18	1	PLUG
E5 15.16	2	OPEN
E5 13.14	3	PLUG

CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.13,3.14
ERROR STATUS NETWORK

3BSH,A1D/3S01 AD112-C

CODE IDENT | DWG NO 60458190 | REV J

SHEET CMC 4.13-05 | PAGE 17-178

LEFT ZIF △1

BIT NAME	I/Ø	SHEET CMC 4.13-	TYPE	VIRTUAL PIN	REAL PIN
ØI12 (0)	I	01	Z	S0A	P2A-40
(1)				0B	39
(2)				0C	38
(3)				0D	37
(4)				0E	35
(5)				0F	34
(6)				10	33
ØI12 (7)		01		11	31
DRB (0)		05		4A	32
(1)				4B	30
(2)				4C	29
DRB (3)	I	05		4D	27
WRNBO (4)	Ø	01		80	03
LELA0A		02		8F	06
LELA4A				90	07
LELA8A		02		91	P2A-08
ADRS16 (6)		00		92	P1A-07
(7)				93	08
(8)				94	09
(9)				95	10
(10)				96	11
(11)				97	12
(12)				98	13
(13)				99	14
(14)				9A	15
(15)				9B	17
(16)				9C	18
(17)				9D	19
(18)				9E	20
(19)				9F	21
(20)				A0	22
(21)				A1	23
(22)				A2	24
(23)				A3	26
(24)				A4	27
(25)				A5	28
(26)				A6	29
(27)				A7	30
(28)				A8	31
(32)				A9	32
(33)				AA	33
(34)				AB	34
ADRS16 (35)		00		AC	35
ADRS (6)		04		AD	37
(7)				AE	38
(8)				AF	39
(9)				B0	P1A-40
(10)				B1	P2A-01
(11)				B2	02
ADRS (12)				B3	P2A-04
EC20P				CA	P1A-01
EC20 (1)				CB	02
(2)				CD	03
(5)				CE	04
EC20 (6)				CF	P1A-06
BDS21 (32)				D0	P2A-19
(33)				D1	20
(34)				D2	21
(35)				D3	22
(36)				D4	23
(37)				D5	24
(38)				D6	26
BDS21 (39)		04		D7	28
CØRERR		05		E1	11
UNCERR				E2	12
CLRERA				E5	17
CLRERB		05		E6	18
EC20 (32)		04		70	10
EC20 (34)	Ø	04	Z	S72	P2A-09

ZIF GRØUND PINS			
P1A- 05	P1A- 25	P2A- 05	P2A- 25
P1A- 16	P1A- 36	P2A- 16	P2A- 36

CØAX △1

BIT NAME	I/Ø	SHEET CMC 4.13-	TYPE	VIRTUAL PIN	REAL PIN
NCLKN (392)	I	00	C	S00	P1C-80
NCLKN (393)				01	04
CLKPM (66)		00		02	52
CTMBC (0)		01		03	105
(1)				04	126
CTMBC (2)				05	117
CTMRS (0)				06	178
(1)				07	121
(2)				08	125
CTMRS (3)		01		09	122
PWPE		02		12	109
RDPE				13	114
RDPERR (0)				14	56
RDPERR (1)		02		15	91
SDMBE		03		16	102
DINPE				21	101
SDSBE		03		24	110
WRT		04		25	15
CTMDI (0)				26	130
(1)				27	129
(2)				28	134
(3)				29	118
(4)				2A	137
(5)		02		2B	142
(6)				2C	141
CTMDI (7)		02		2D	146
CMCERR		05		4E	158
CTMDI (8)	I	01		4F	177
RGSLA (0)	Ø			81	185
(1)				82	174
(2)				83	157
RGSLA (3)				84	161
RGSLB (0)				85	64
(1)				86	169
(2)				87	162
RGSLB (3)				88	166
RGSLPA				89	181
RGSLPB		01		8A	154
RSB		00		8B	88
RCB		00		8C	98
BDS21 (0)		04		D8	16
(1)				D9	28
(2)				DA	40
BDS21 (3)				DB	39
BLKSBE		04		DC	32
ADRS01		05		E4	182
RW04A (0)		01		F3	138
(1)				F4	133
(2)				F5	145
(3)				F6	149
(4)				F7	150
(5)				F8	153
(6)				F9	170
(7)				FA	165
RW04A (8)	Ø	01		FB	173
ADRS18 (27)	I	02		50	68
(28)				51	36
(32)				52	106
(33)				53	87
(34)				54	97
ADRS18 (35)		02		55	55
SETDLY		04		56	51
PTCDP0	I	02		57	76
DCERSP	Ø	04		74	31
DRSW	I	05		58	007
DSRF	Ø	05		S75	186
ADRS16 (3)		04		76	75
ADRS16 (4)				77	79
ADRS16 (5)				78	72
ADRS18 (3)				79	84
ADRS18 (4)				FE	92
ADRS18 (5)				FD	P1C-83
LMBPD	Ø	04	C	SX0	P1C-113
CPUDIS(0)	Ø	04	C	SX1	P1C-071
PTCD16 (0)	I	03	C	G6	P1C-003
PTCD16 (1)		03		G7	019
PTCD16 (2)		03		G8	059
PTCD18 (0)		02		G9	060
PTCD18 (1)		02		GA	063
PTCD18 (2)	I	02	C	GB	P1C-067

RIGHT ZIF △1

BIT NAME	I/Ø	SHEET CMC 4.13-	TYPE	VIRTUAL PIN	REAL PIN
MBDFLT	I	02	Z	S17	P2B-21
ILFNM		02		18	07
CMCPE		03		19	40
CSUAPE				20	31
PECD (0)				22	33
PECD (1)		03		23	P2B-35
ADRSM (1)		04		2E	P1B-01
(6)				2F	02
(7)				30	03
(8)				31	04
(9)				32	06
(10)				33	07
(11)				34	08
(12)				35	09
(13)				36	10
(14)				37	11
(15)				38	12
(16)				39	13
(17)				3A	14
(18)				3B	15
(19)				3C	17
(20)				3D	18
(21)				3E	19
(22)				3F	20
(23)				40	21
(24)				41	22
(25)				42	23
(26)				43	24
(27)				44	26
(28)				45	27
(32)				46	28
(33)				47	29
(34)				48	30
ADRSM (35)	I	04		49	P1B-31
WCB (0)	Ø	00		8D	P2B-06
WCB (1)		00		8E	08
ADRS (13)		04		B4	22
(14)				B5	23
(15)				B6	24
(16)				B7	26
(17)				B8	27
(18)				B9	28
(19)				BA	29
(20)				BB	30
(21)				BC	32
(22)				BD	09
(23)				BE	10
(24)				BF	11
(25)				C0	12
ADRS (26)				C1	P2B-14
MCWRTA (0)				C2	P1B-32
(1)				C3	33
(2)				C4	34
(3)				C5	35
(4)				C6	37
(5)				C7	38
(6)				C8	39
MCWRTA (7)				C9	P1B-40
WRTA				DD	P2B-02
WRTPA				DE	01
WRTB				DF	04
WRTPB		04		E0	03
CBCA01		05		E3	39
BYTSLB (0)		01		E7	18
(1)				E8	19
BYTSLB (2)				E9	20
BYTSLA (0)				F0	13
(1)				F1	15
BYTSLA (2)				F2	17
WRTB0		01		FC	37
EC20 (33)		04		71	34
EC20 (35)	Ø	04	Z	S73	38
ADRSM (3)	I			GC	05
ADRSM (4)	I			GD	P2B-16
ADRSM (5)	I			GE	P1B-05

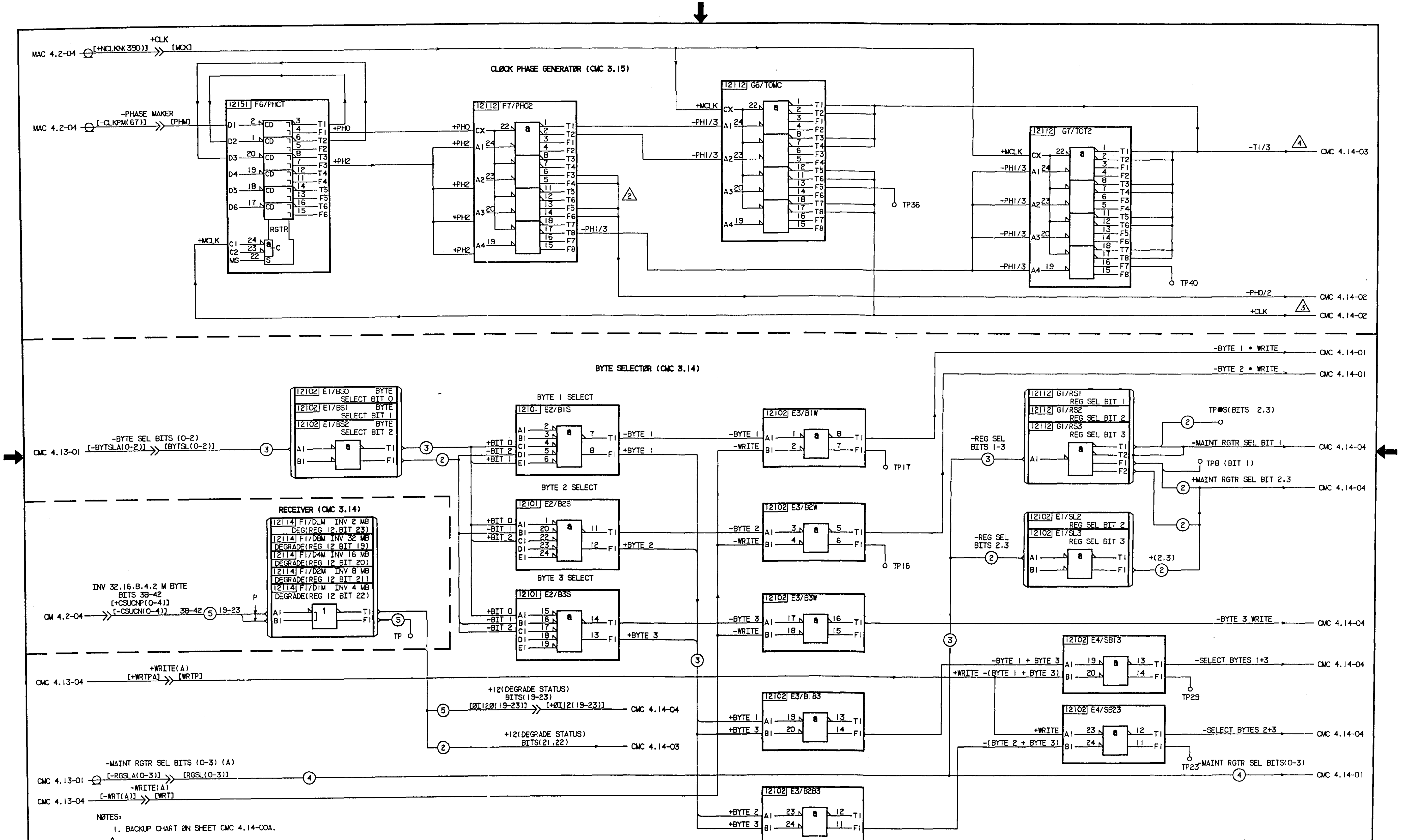
ZIF GRØUND PINS			
	P1B-25		P2B-25
P1B-16	P1B-36		P2B-36

NØTE:

△1 CØNNECTØR TYPES:

C = CØAX
D = DIFFERENTIAL
Z = ZIF FØIL ØN INTERCØNNECT BØARD

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN
LEVEL 4 CØNNECTØR CHART
SUPPLEMENTAL WIRING INFØRMATIØN
3BSH:A1D/3S01
AD112-C
CODE IDENT
DWG NO 60458190
REV K
SHEET CMC 4.13-CC
PAGE 17-179



NØTES:

1. BACKUP CHART ØN SHEET CMC 4.14-00A.

△2 4 ØUTPUTS 1 PER 12155'S.

△3 4 ØUTPUTS 1 PER 5 12155'S ØR 1PER 3 12155'S, 1 12151.

△4 12 ØUTPUTS 1 PER 2 12151'S.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM - CMC 3.14.3.15 BYTE SELECTØR, RECEIVER, CLØCK PHASE GENERATØR.	CODE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	7BTH,A1C/3T00 AD112-C	SHEET CMC 4.14-00		PAGE 17-180

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12102 LOC: E1 NAME: BS0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-08		T	A1	1	BYTE SEL	8	T1	E2-4	3
			B1	2	BIT 0	7	F1	TERM	

12102 LOC: E1 NAME: BS1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-09		T	A1	3	BYTE SEL	5	T1	E2-6	
			B1	4	BIT 1	6	F1	E2-20	

12102 LOC: E1 NAME: BS2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-10		T	A1	17	BYTE SEL	16	T1	E2-22	
			B1	18	BIT 2	15	F1	E2-17	

12114 LOC: F1 NAME: DLM

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-29		T	A1	2	REG 12	7	T1	P1A-26	
P2A-31		T	B1	1	BIT 16	8	F1	TP-5	

12114 LOC: F1 NAME: D8M

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-39		T	A1	4	REG 12	5	T1	P1A-23	2
P2A-40		T	B1	3	BIT 19	6	F1	TP-12	

12114 LOC: F1 NAME: D4M

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-37		T	A1	18	REG 12	15	T1	P1A-21	2
P2A-38		T	B1	17	BIT 20	16	F1	TP-10	

12114 LOC: F1 NAME: D2M

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-33		T	A1	20	REG 12	13	T1	F9-17	2
P2A-35		T	B1	19	BIT 21	14	F1	TP-13	

12114 LOC: F1 NAME: D1M

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-32		T	A1	24	REG 12	11	T1	F9-18	2
P2A-34		T	B1	23	BIT 22	12	F1	TP-6	

12112 LOC: G1 NAME: RS1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1C-7	G5-18		A1	24	REG SEL BIT 1	1	T1	E5-20	
						2	T2	E10-20	
						3	F1	TP-8	
						4	F2	TERM-	

12112 LOC: G1 NAME: RS2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1C-12	E1-19		A1	23	REG SEL BIT 2	8	T1	TP-1	
						7	T2	TERM	
						6	F1	D1-20	
						5	F2	D6-20	

12112 LOC: G1 NAME: RS3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1C-8	E1-23		A1	20	REG SEL BIT 3	11	T1	TP-7	
						12	T2	TERM	
						13	F1	D6-19	
						14	F2	D1-19	

12102 LOC: E1 NAME: SL2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G1-23	G5-16		A1	19	REG SEL	13	T1	TERM	
			B1	20	BIT 2	14	F1	E7-20	

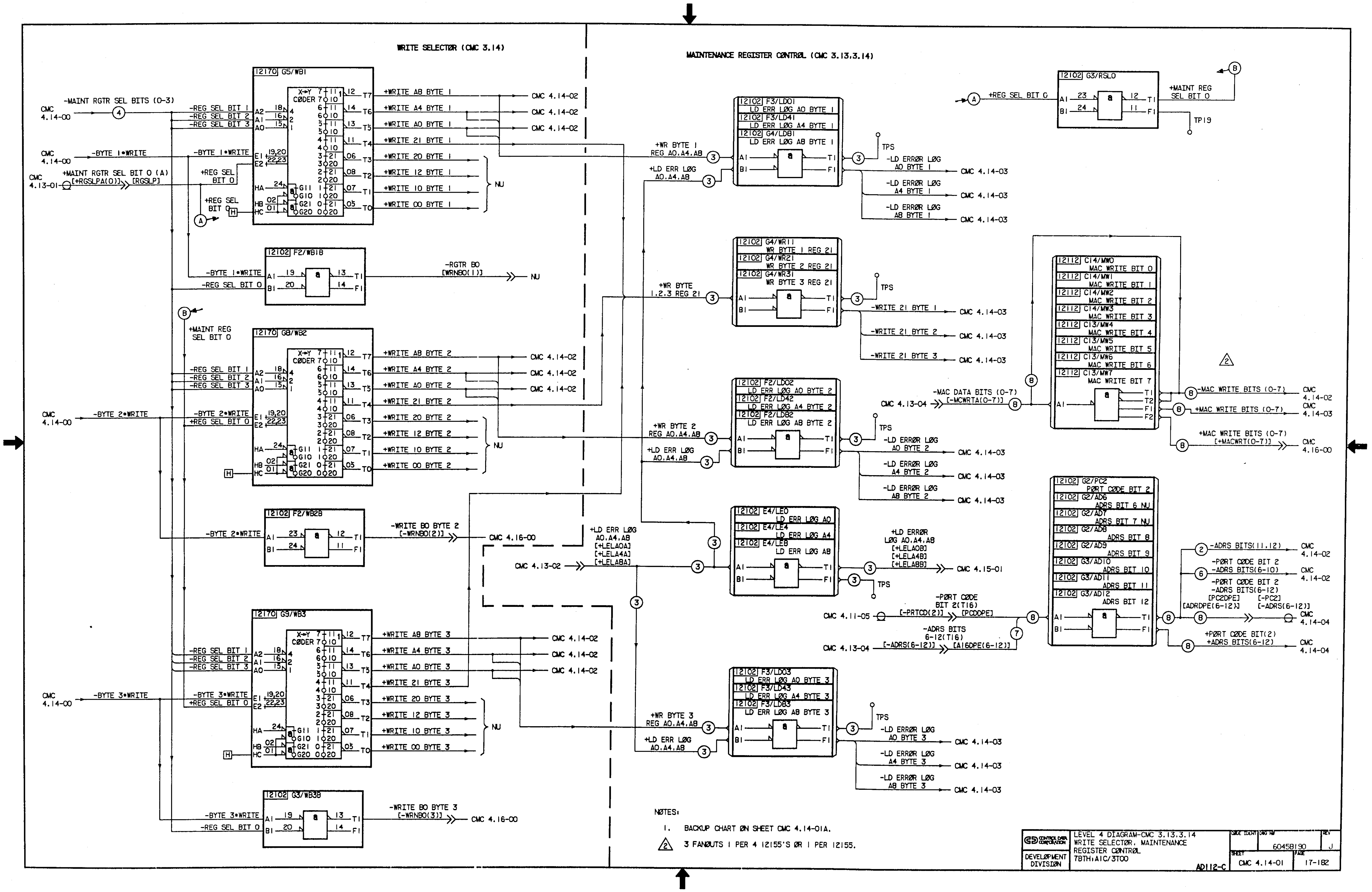
12102 LOC: E1 NAME: SL3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G1-20	G5-15		A1	23	REG SEL	12	T1	TERM	
			B1	24	BIT 3	11	F1	E7-19	

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.14-00
7BTH; AIC/3T00 AD112-C

CODE IDENT		DWG NO	REV
34010	D	60458190	J
		SHEET CMC 4.14-00A	17-181



NØTES:

1. BACKUP CHART ØN SHEET CMC 4.14-01A.

△2 3 FANØUTS 1 PER 4 12155'S ØR 1 PER 12155.

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN
LEVEL 4 DIAGRAM-CMC 3.13,3.14
WRITE SELECTØR, MAINTENANCE
REGISTER CØNTRØL
7BTH1A1C/3T00
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.14-01	17-182

12102 LOC: F3 NAME: LD01

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-13	G11-20		A1	1	LD ERR LOG	8	T1	TP-15	
F3-18	F2-2		B1	2	A0 BYTE 1	7	F1	B5-23	

12102 LOC: F3 NAME: LD41

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-14	B7-20		A1	3	LD ERR LOG	5	T1	TP-27	
F3-20	F2-4		B1	4	A4 BYTE 1	6	F1	C1-23	

12102 LOC: G4 NAME: LD81

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-12	G13-20		A1	1	LD ERR LOG	8	T1	TP-25	
E4-17	F3-24		B1	2	A8 BYTE 1	7	F1	C7-23	

12102 LOC: G4 NAME: WR11

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-11		T	A1	3	WR BYTE 1	5	T1	TP-24	
			B1	4	REG 21	6	F1	A3-23	

12102 LOC: G4 NAME: WR21

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G8-11		T	A1	17	WR BYTE 2	16	T1	TP-34	
			B1	18	REG 21	15	F1	A5-23	

12102 LOC: G4 NAME: WR31

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G9-11		T	A1	19	WR BYTE 3	13	T1	TP-26	
			B1	20	REG 21	14	F1	B11-23	

12102 LOC: F2 NAME: LD02

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G8-13	B8-20		A1	1	LD ERR LOG	8	T1	TP-9	
F3-2		T	B1	2	A0 BYTE 2	7	F1	B3-23	

12102 LOC: F2 NAME: LD42

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G8-14	B9-20		A1	3	LD ERR LOG	5	T1	TP-14	
F3-4		T	B1	4	A4 BYTE 2	6	F1	C3-23	

12102 LOC: F2 NAME: LD82

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G8-12	B10-20		A1	17	LD ERR LOG	16	T1	TP-11	
F3-24		T	B1	18	A8 BYTE 2	15	F1	C9-23	

12102 LOC: E4 NAME: LE0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-07	F3-18		A1	1	LD ERR	8	T1	P2A-09	
			B1	2	LOG A0	7	F1	TP-21	

12102 LOC: E4 NAME: LE4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-08	F3-20		A1	3	LD ERR	5	T1	P2A-11	
			B1	4	LOG A4	6	F1	TP-30	

12102 LOC: E4 NAME: LE8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-10	G4-2		A1	17	LD ERR	16	T1	P2A-12	
			B1	18	LOG A8	15	F1	TP-31	

12102 LOC: F3 NAME: LD03

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G9-13	E13-20		A1	17	LD ERR LOG	16	T1	TP-28	
E4-1	F3-2		B1	18	A0 BYTE 3	15	F1	B1-23	

12102 LOC: F3 NAME: LD43

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G9-14	G10-20		A1	19	LD ERR LOG	13	T1	TP-18	
E4-3	F3-4		B1	20	A4 BYTE 3	14	F1	C5-23	

12102 LOC: F3 NAME: LD83

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G9-12	F13-20		A1	23	LD ERR LOG	12	T1	TP-20	
G4-2	F2-18		B1	24	A8 BYTE 3	11	F1	C11-23	

12112 LOC: C14 NAME: MW0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-29	E13-2		A1	24	MAC WRITE BIT 0	1	T1	B10-2	
						2	T2	F13-2	
						3	F1	B11-2	
						4	F2	P1B-21	

12112 LOC: C14 NAME: MW1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-31	E13-4		A1	23	MAC WRITE BIT 1	8	T1	B07-4	
						7	T2	F13-4	
						6	F1	B11-1	
						5	F2	P1B-22	

12112 LOC: C14 NAME: MW2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-32	E13-16		A1	20	MAC WRITE BIT 2	11	T1	B07-16	
						12	T2	F13-16	
						13	F1	B11-20	
						14	F2	P1B-23	

12112 LOC: C14 NAME: MW3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-33	E13-18		A1	19	MAC WRITE BIT 3	18	T1	B10-18	
						17	T2	F13-18	
						16	F1	B11-19	
						15	F2	P1B-24	

12112 LOC: C13 NAME: MW4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-34	E14-2		A1	24	MAC WRITE BIT 4	1	T1	A10-2	
						2	T2	F14-2	
						3	F1	B11-18	
						4	F2	P1B-26	

12112 LOC: C13 NAME: MW5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-35	E14-4		A1	23	MAC WRITE BIT 5	8	T1	A07-4	
						7	T2	F14-4	
						6	F1	B11-17	
						5	F2	P1B-27	

12112 LOC: C13 NAME: MW6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-37	A7-16		A1	20	MAC WRITE BIT 6	11	T1	A10-16	
						12	T2	F14-16	
						13	F1	B12-2	
						14	F2	P1B-28	

12112 LOC: C13 NAME: MW7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-38	E14-18		A1	19	MAC WRITE BIT 7	18	T1	A10-18	
						17	T2	F14-18	
						16	F1	B12-1	
						15	F2	P1B-30	

12102 LOC: G2 NAME: PC2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1C-51		T	A1	1	PORT CD	8	T1	B7-15	
			B1	2	BIT 2	7	F1	F9-2	

12102 LOC: G2 NAME: AD6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-35		T	A1	3	ADRS	5	T1	B7-7	
			B1	4	BIT 06	6	F1	F9-3	

12102 LOC: G2 NAME: AD7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-37		T	A1	17	ADRS	16	T1	A07-1	
			B1	18	BIT 07	15	F1	F9-4	

12102 LOC: G2 NAME: AD8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-38		T	A1	19	ADRS	13	T1	A07-3	
			B1	20	BIT 08	14	F1	F9-5	

12102 LOC: G2 NAME: AD9

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-39		T	A1	23	ADRS	12	T1	A07-15	
			B1	24	BIT 09	11	F1	F9-6	

12102 LOC: G3 NAME: AD10

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-40		T	A1	1	ADRS	8	T1	A07-17	
			B1	2	BIT 10	7	F1	F9-20	

12102 LOC: G3 NAME: AD11

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-1		T	A1	3	ADRS	5	T1	B9-1	
			B1	4	BIT 11	6	F1	F8-22	

12102 LOC: G3 NAME: AD12

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-2		T	A1	17	ADRS	16	T1	B09-3	
			B1	18	BIT 12	15	F1	F9-23	

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.14-01

78TH; AIC/3TOO

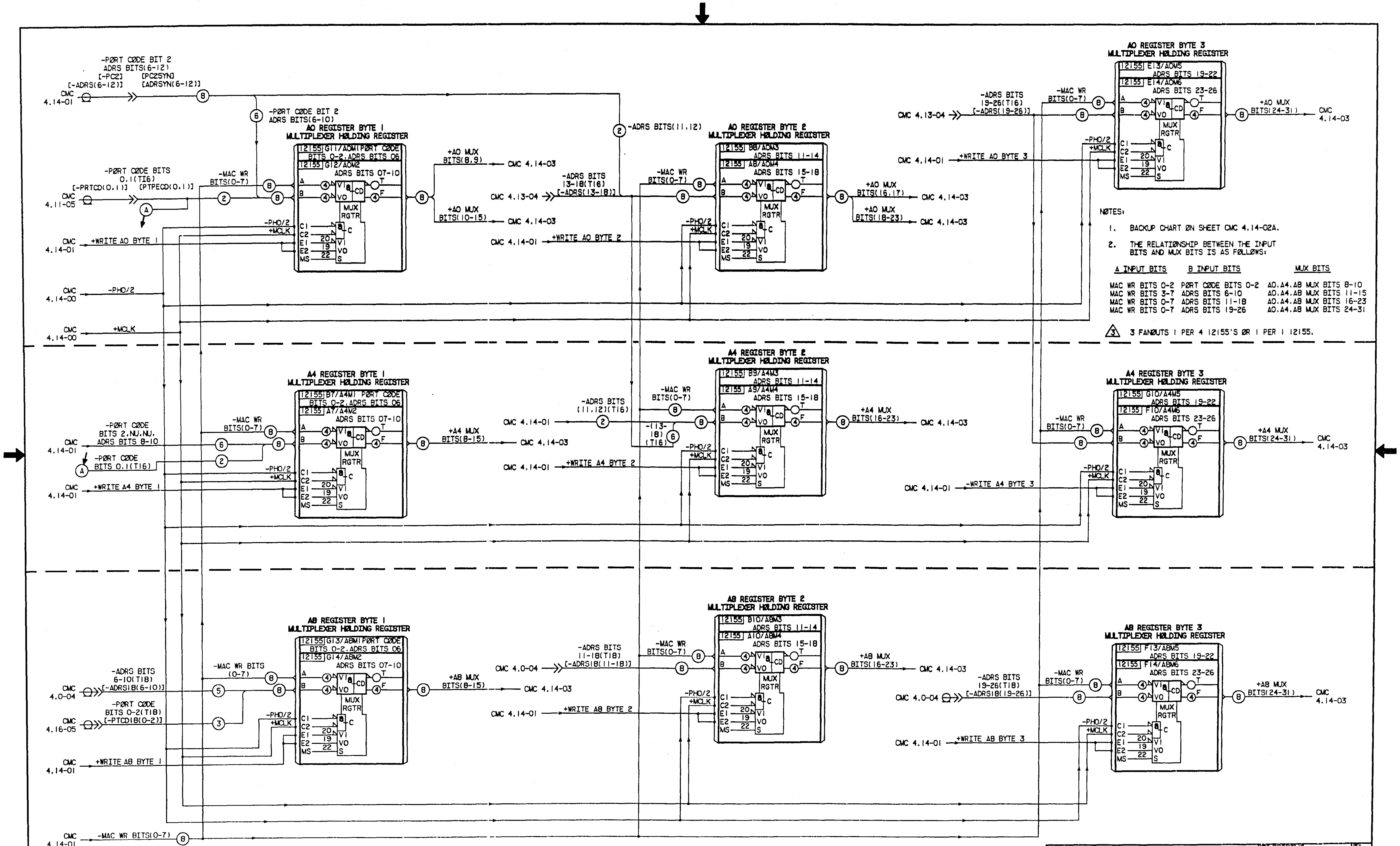
AD112-C

DWG NO 60458190

REV J

SHEET CMC 4.14-01A

17-183


A0 REGISTER BYTE 1
MULTIPLEXER HØLDING REGISTER
12155 G11/A0M1 PØRT CØDE BITS 0-2,ADRS BITS 06
12155 G12/A0M2 ADRS BITS 07-10
A0 REGISTER BYTE 2
MULTIPLEXER HØLDING REGISTER
12155 B8/A0M3 ADRS BITS 11-14
12155 A8/A0M4 ADRS BITS 15-18
A0 REGISTER BYTE 3
MULTIPLEXER HØLDING REGISTER
12155 E13/A0M5 ADRS BITS 19-22
12155 E14/A0M6 ADRS BITS 23-26
A4 REGISTER BYTE 1
MULTIPLEXER HØLDING REGISTER
12155 B7/A4M1 PØRT CØDE BITS 0-2,ADRS BITS 06
12155 A7/A4M2 ADRS BITS 07-10
A4 REGISTER BYTE 2
MULTIPLEXER HØLDING REGISTER
12155 B9/A4M3 ADRS BITS 11-14
12155 A9/A4M4 ADRS BITS 15-18
A4 REGISTER BYTE 3
MULTIPLEXER HØLDING REGISTER
12155 G10/A4M5 ADRS BITS 19-22
12155 F10/A4M6 ADRS BITS 23-26
A8 REGISTER BYTE 1
MULTIPLEXER HØLDING REGISTER
12155 G13/A8M1 PØRT CØDE BITS 0-2,ADRS BITS 06
12155 G14/A8M2 ADRS BITS 07-10
A8 REGISTER BYTE 2
MULTIPLEXER HØLDING REGISTER
12155 B10/A8M3 ADRS BITS 11-14
12155 A10/A8M4 ADRS BITS 15-18
A8 REGISTER BYTE 3
MULTIPLEXER HØLDING REGISTER
12155 F13/A8M5 ADRS BITS 19-22
12155 F14/A8M6 ADRS BITS 23-26
MUX RGTR
A B C1 C2 E1 E2 MS VI VO CD T F C S
-PØRT CØDE BIT 2 ADRS BITS(6-12)
[-PC2] [PC2SYN]
[-ADRS(6-12)] [ADRSYN(6-12)]
CMC 4.14-01
-PØRT CØDE BIT 2 ADRS BITS(6-10)
-ADRS BITS(11,12)
-PØRT CØDE BITS 0,1(T16)
[-PRTCD(0,1)] [PTPECD(0,1)]
CMC 4.11-05
-MAC WR BITS(0-7)
+WRITE A0 BYTE 1
-PH0/2
+MCLK
CMC 4.14-00
+A0 MUX BITS(8,9)
+A0 MUX BITS(10-15)
CMC 4.14-03
-ADRS BITS 13-18(T16) [-ADRS(13-18)]
CMC 4.13-04
+WRITE A0 BYTE 2
+A0 MUX BITS(16,17)
+A0 MUX BITS(18-23)
-ADRS BITS 19-26(T16) [-ADRS(19-26)]
+WRITE A0 BYTE 3
+A0 MUX BITS(24-31)
-PØRT CØDE BITS 2,NU,NU, ADRS BITS 8-10
-PØRT CØDE BITS 0,1(T16)
+WRITE A4 BYTE 1
+A4 MUX BITS(8-15)
-ADRS BITS (11,12)(T16)
-(13-18)(T16)
+WRITE A4 BYTE 2
+A4 MUX BITS(16-23)
+WRITE A4 BYTE 3
+A4 MUX BITS(24-31)
-ADRS BITS 6-10(T18) [-ADRS18(6-10)]
CMC 4.0-04
-PØRT CØDE BITS 0-2(T18) [-PTCD18(0-2)]
CMC 4.16-05
+WRITE A8 BYTE 1
-MAC WR BITS (0-7)
+A8 MUX BITS(8-15)
-ADRS BITS 11-18(T18) [-ADRS18(11-18)]
+WRITE A8 BYTE 2
+A8 MUX BITS(16-23)
-ADRS BITS 19-26(T18) [-ADRS18(19-26)]
+WRITE A8 BYTE 3
+A8 MUX BITS(24-31)
-MAC WR BITS(0-7)
CMC 4.14-01
3

NØTES:

1. BACKUP CHART ØN SHEET CMC 4.14-02A.

2. THE RELATIØNSHIP BETWEEN THE INPUT BITS AND MUX BITS IS AS FØLLØWS:

A INPUT BITS	B INPUT BITS	MUX BITS
MAC WR BITS 0-2	PØRT CØDE BITS 0-2	A0,A4,A8 MUX BITS 8-10
MAC WR BITS 3-7	ADRS BITS 6-10	A0,A4,A8 MUX BITS 11-15
MAC WR BITS 0-7	ADRS BITS 11-18	A0,A4,A8 MUX BITS 16-23
MAC WR BITS 0-7	ADRS BITS 19-26	A0,A4,A8 MUX BITS 24-31

△3 3 FANØUTS 1 PER 4 12155'S ØR 1 PER 1 12155.

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CMC 3.13
A0/A4/A8 MULTIPLEXER

78TH;A1C/3T00

AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.14-02
PAGE 17-184

12155 LOC: G11 NAME: AOM1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G13-2	G10-2		A1	2	AO MUX	8	T1	TERM	
PIC-134			B1	1	BIT 8	7	F1	B5-2	
G13-4	G10-4		A2	4	AO MUX	5	T2	TERM	
PIC-130			B2	3	BIT 9	6	F2	B5-1	
G13-16	G10-16		A3	16	AO MUX	13	T3	TERM	
PIC-125		T	B3	15	BIT 10	14	F3	B6-2	
G13-18	G10-18		A4	18	AO MUX	12	T4	TERM	
PIC-129		T	B4	17	BIT 11	11	F4	B6-1	
F10-24	G13-24		C1	24					
G10-23	G12-23		C2	23					
F3-1	G11-19		E1	20					
G11-20	G12-19		E2	19					
			MS	22					

12155 LOC: G12 NAME: AOM2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G14-2	F10-02		A1	2	AO MUX	8	T1	TERM	
PIC-145		T	B1	1	BIT 12	7	F1	B6-20	
G14-4	F10-04		A2	4	AO MUX	5	T2	TERM	
PIC-141		T	B2	3	BIT 13	6	F2	B6-19	
G14-16	F10-16		A3	16	AO MUX	13	T3	TERM	
PIC-142		T	B3	15	BIT 14	14	F3	B6-18	
G14-18	F10-18		A4	18	AO MUX	12	T4	TERM	
PIC-146		T	B4	17	BIT 15	11	F4	B6-17	
G10-24	F13-24		C1	24					
G11-23	G13-23		C2	23					
G12-19		T	E1	20					
G11-19	G12-20		E2	19					
			MS	22					

12155 LOC: B8 NAME: AOM3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B9-2	B7-2		A1	2	AO MUX	8	T1	TERM	
PIC-97		T	B1	1	BIT 16	7	F1	B4-2	
B7-4	B9-4		A2	4	AO MUX	5	T2	TERM	
PIC-92		T	B2	3	BIT 17	6	F2	B4-1	
B7-16	B9-16		A3	16	AO MUX	13	T3	TERM	
B9-3		T	B3	15	BIT 18	14	F3	B3-2	
B9-18	B7-18		A4	18	AO MUX	12	T4	TERM	
B9-15		T	B4	17	BIT 19	11	F4	B3-1	
B7-24	B9-24		C1	24					
B7-23	B9-23		C2	23					
F2-1	B8-19		E1	20					
B8-20	A8-20		E2	19					
			MS	22					

12155 LOC: A8 NAME: AOM4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A9-2	A7-2		A1	2	AO MUX	8	T1	TERM	
B9-17		T	B1	1	BIT 20	7	F1	B3-20	
A7-4	A9-4		A2	4	AO MUX	5	T2	TERM	
A9-3		T	B2	3	BIT 21	6	F2	B3-19	
A9-16	A7-16		A3	16	AO MUX	13	T3	TERM	
A9-15		T	B3	15	BIT 22	14	F3	B3-18	
A9-18	A7-18		A4	18	AO MUX	12	T4	TERM	
A9-17		T	B4	17	BIT 23	11	F4	B3-17	
A7-24	A9-24		C1	24					
A7-23	A9-23		C2	23					
B8-19	A8-19		E1	20					
A8-20		T	E2	19					
			MS	22					

12155 LOC: E13 NAME: AOM5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C14-24		T	A1	2	AO MUX	8	T1	TERM	
P2B-18	G10-1		B1	1	BIT 24	7	F1	B1-2	
C14-23		T	A2	4	AO MUX	5	T2	TERM	
P2B-19	G10-3		B2	3	BIT 25	6	F2	B1-1	
C14-20		T	A3	16	AO MUX	13	T3	TERM	
P2B-20	G10-15		B3	15	BIT 26	14	F3	B1-20	
C14-18		T	A4	18	AO MUX	12	T4	TERM	
P2B-01	G10-17		B4	17	BIT 27	11	F4	B1-19	
F13-24	E14-24		C1	24					
E14-23		T	C2	23					
F3-17	E13-19		E1	20					
E13-20	F14-19		E2	19					
			MS	22					

12155 LOC: E14 NAME: AOM6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-24		T	A1	2	AO MUX	8	T1	TERM	
P2B-02	F10-1		B1	1	BIT 28	7	F1	B1-18	
C13-23		T	A2	4	AO MUX	5	T2	TERM	
P2B-03	F10-3		B2	3	BIT 29	6	F2	B1-17	
C13-20		T	A3	16	AO MUX	13	T3	TERM	
P2B-04	F10-15		B3	15	BIT 30	14	F3	B2-2	
C13-19		T	A4	18	AO MUX	12	T4	TERM	
P2B-06	F10-17		B4	17	BIT 31	11	F4	B2-1	
E13-24		T	C1	24					
F14-23	E13-23		C2	23					
E14-19		T	E1	20					
E13-19	E14-20		E2	19					
			MS	22					

12155 LOC: B7 NAME: A4M1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B8-2		T	A1	2	A4 MUX	8	T1	TERM	
G11-1		T	B1	1	BIT 8	7	F1	C01-2	
C14-8	B8-4		A2	4	A4 MUX	5	T2	TERM	
G11-3		T	B2	3	BIT 9	6	F2	C01-1	
C14-11	B8-16		A3	16	A4 MUX	13	T3	TERM	
G02-08	PIC-075		B3	15	BIT 10	14	F3	C01-20	
B8-18		T	A4	18	A4 MUX	12	T4	TERM	
G02-05	PIC-102		B4	17	BIT 11	11	F4	C01-19	
F7-13	B8-24		C1	24					
G6-17	B8-23		C2	23					
F3-3	B7-19		E1	20					
B7-20	A7-20		E2	19					
			MS	22					

12155 LOC: A7 NAME: A4M2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A08-2		T	A1	2	A4 MUX	8	T1	TERM	
G02-16	PIC-083		B1	1	BIT 12	7	F1	C01-18	
C13-8	A08-4		A2	4	A4 MUX	5	T2	TERM	
G02-13	PIC-101		B2	3	BIT 13	6	F2	C01-17	
A08-16		T	A3	16	A4 MUX	13	T3	TERM	
G02-12	PIC-076		B3	15	BIT 14	14	F3	C02-2	
A08-18		T	A4	18	A4 MUX	12	T4	TERM	
G03-08	PIC-084		B4	17	BIT 15	11	F4	C02-1	
F7-14	A8-24		C1	24					
F6-24	A8-23		C2	23					
B7-19	A7-19		E1	20					
A7-20		T	E2	19					
			MS	22					

12155 LOC: B9 NAME: A4M3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B10-2	B08-2		A1	2	A4 MUX	8	T1	TERM	
G3-5	PIC-105	T	B1	1	BIT 16	7	F1	C3-2	
B8-4	B10-4		A2	4	A4 MUX	5	T2	TERM	
G3-16	PIC-110	T	B2	3	BIT 17	6	F2	C3-1	
B8-16	B10-16		A3	16	A4 MUX	13	T3	TERM	
P2B-11	B8-15		B3	15	BIT 18	14	F3	C3-20	
B10-18	B8-18		A4	18	A4 MUX	12	T4	TERM	
P2B-12	B8-17		B4	17	BIT 19	11	F4	C3-19	
B8-24	B10-24		C1	24					
B8-23	B10-23		C2	23					
F2-3	B9-19		E1	20					
B9-20	A9-20		E2	19					
			MS	22					

12155 LOC: A9 NAME: A4M4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A10-2	A08-2		A1	2	A4 MUX	8	T1	TERM	
P2B-13	A08-1		B1	1	BIT 20	7	F1	C3-18	
A08-4	A10-4		A2	4	A4 MUX	5	T2	TERM	
P2B-14	A08-3		B2	3	BIT 21	6	F2	C3-17	
A10-16	A08-16		A3	16	A4 MUX	13	T3	TERM	
P2B-15	A08-15		B3	15	BIT 22	14	F3	C4-2	
A10-18	A08-18		A4	18	A4 MUX	12	T4	TERM	
P2B-17	A08-17		B4	17	BIT 23	11	F4	C4-1	
A8-24	A10-24		C1	24					
A8-23	A10-23		C2	23					
B9-19	A9-19		E1	20					
A9-20		T	E2	19					
			MS	22					

12155 LOC: G10 NAME: A4M5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G11-2		T	A1	2	A4 MUX	8	T1	TERM	
E13-1		T	B1	1	BIT 24	7	F1	C5-2	
G11-4		T	A2	4	A4 MUX	5	T2	TERM	
E13-3		T	B2	3	BIT 25	6	F2	C5-1	
G11-16		T	A3	16	A4 MUX	13	T3	TERM	
E13-15		T	B3	15	BIT 26	14	F3	C5-20	
G11-18		T	A4	18	A4 MUX	12	T4	TERM	
E13-17		T	B4	17	BIT 27	11	F4	C5-19	
F7-6	G12-24		C1	24					
G6-17	G11-23		C2	23					
F3-19	G10-19		E1	20					
G10-20	F10-20		E2	19					
			MS	22					

12155 LOC: F10 NAME: A4M6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G12-2		T	A1	2	A4 MUX	8	T1	TERM	
F14-1		T	B1	1	BIT 28	7	F1	C5-18	
G12-4		T	A2	4	A4 MUX	5	T2	TERM	
E14-3		T	B2	3	BIT 29	6	F2	C5-17	
G12-16		T	A3	16	A4 MUX	13	T3	TERM	
E14-15		T	B3	15	BIT 30	14	F3	C6-2	
G12-18		T	A4	18	A4 MUX	12	T4	TERM	
E14-17		T	B4	17	BIT 31	11	F4	C6-1	
F7-5	G11-24		C1	24					
G6-18	F13-23		C2	23					
G10-19	F10-19		E1	20					
F10-20		T	E2	19					
			MS	22					

12155 LOC: G13 NAME: A8M1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F13-2	G11-2		A1	2	A8 MUX	8	T1	TERM	
PIC-162		T	B1	1	BIT 8	7	F1	C7-2	
F13-4	G11-4		A2	4	A8 MUX	5	T2	TERM	
PIC-158		T	B2	3	BIT 9	6	F2	C7-1	
F13-16	G11-16		A3	16	A8 MUX	13	T3	TERM	
PIC-153		T	B3	15	BIT 10	14	F3	C7-20	
F13-18	G11-18		A4	18	A8 MUX	12	T4	TERM	
PIC-157		T	B4	17	BIT 11	11	F4	C7-19	
G11-24	G14-24		C1	24					
G12-23	G14-23		C2	23					
G4-1	G13-19		E1	20					
G13-20	G14-19		E2	19					
			MS	22					

12155 LOC: G14 NAME: A8M2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F14-2	G12-2		A1	2	A8 MUX	8	T1	TERM	
PIC-182		T	B1	1	BIT 12	7	F1	C7-18	
F14-4	G12-4		A2	4	A8 MUX	5	T2	TERM	
PIC-178		T	B2	3	BIT 13	6	F2	C7-17	
F14-16	G12-16		A3	16	A8 MUX	13	T3	TERM	
PIC-166		T	B3	15	BIT 14	14	F3	C8-2	
F14-18	G12-18		A4	18	A8 MUX	12	T4	TERM	
PIC-177		T	B4	17	BIT 15	11	F4	C8-1	
G13-24	F14-24		C1	24					
G13-23		T	C2	23					
G14-19		T	E1	20					
G13-19	G14-20		E2	19					
			MS	22					

12155 LOC: B10 NAME: A8M3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C14-1	B09-2		A1	2	A8 MUX	8	T1	TERM	
PIC-126		T	B1	1	BIT 16	7	F1	C9-2	
B09-4		T	A2	4	A8 MUX	5	T2	TERM	
PIC-121		T	B2	3	BIT 17	6	F2	C9-1	
B09-16		T	A3	16	A8 MUX	13	T3	TERM	
PIC-109		T	B3	15	BIT 18	14	F3	C9-20	
C14-18	B09-18		A4	18	A8 MUX	12	T4	TERM	
PIC-114		T	B4	17	BIT 19	11	F4	C9-19	
B9-24		T	C1	24					
B10-23		T	C2	23					
F2-17	B10-19		E1	20					
B10-20	A10-19		E2	19					
			MS	22					

12155 LOC: A10 NAME: A8M4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-1	A09-2		A1	2	A8 MUX	8	T1	TERM	
PIC-122		T	B1	1	BIT 20	7	F1	C9-18	
A09-4		T	A2	4	A8 MUX	5	T2	TERM	
PIC-117		T	B2	3	BIT 21	6	F2	C9-17	
C13-11	A09-16		A3	16	A8 MUX	13	T3	TERM	
PIC-113		T	B3	15	BIT 22	14	F3	C10-2	
C13-18	A09-18		A4	18	A8 MUX	12	T4	TERM	
PIC-118		T	B4	17	BIT 23	11	F4	C10-1	
A9-24		T	C1	24					
A9-23		T	C2	23					
A10-19		T	E1	20					
B10-19	A10-20		E2	19					
			MS	22					

12155 LOC: F13 NAME: A8M5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C14-2	G13-2		A1	2	A8 MUX	8	T1	TERM	
PIC-170		T	B1	1	BIT 24	7	F1	C11-2	
C14-7	G13-4		A2	4	A8 MUX	5	T2	TERM	
PIC-169		T	B2	3	BIT 25	6	F2	C11-1	
C14-12	G13-16		A3	16	A8 MUX	13	T3	TERM	
PIC-154		T	B3	15	BIT 26	14	F3	C11-20	
C14-17	G13-18		A4	18	A8 MUX	12	T4	TERM	
PIC-174		T	B4	17	BIT 27	11	F4	C11-19	
G12-24	E13-24		C1	24					
F10-23	F14-23		C2	23					
F3-23	F13-19		E1	20					
F13-20	F14-19		E2	19					
			MS	22					

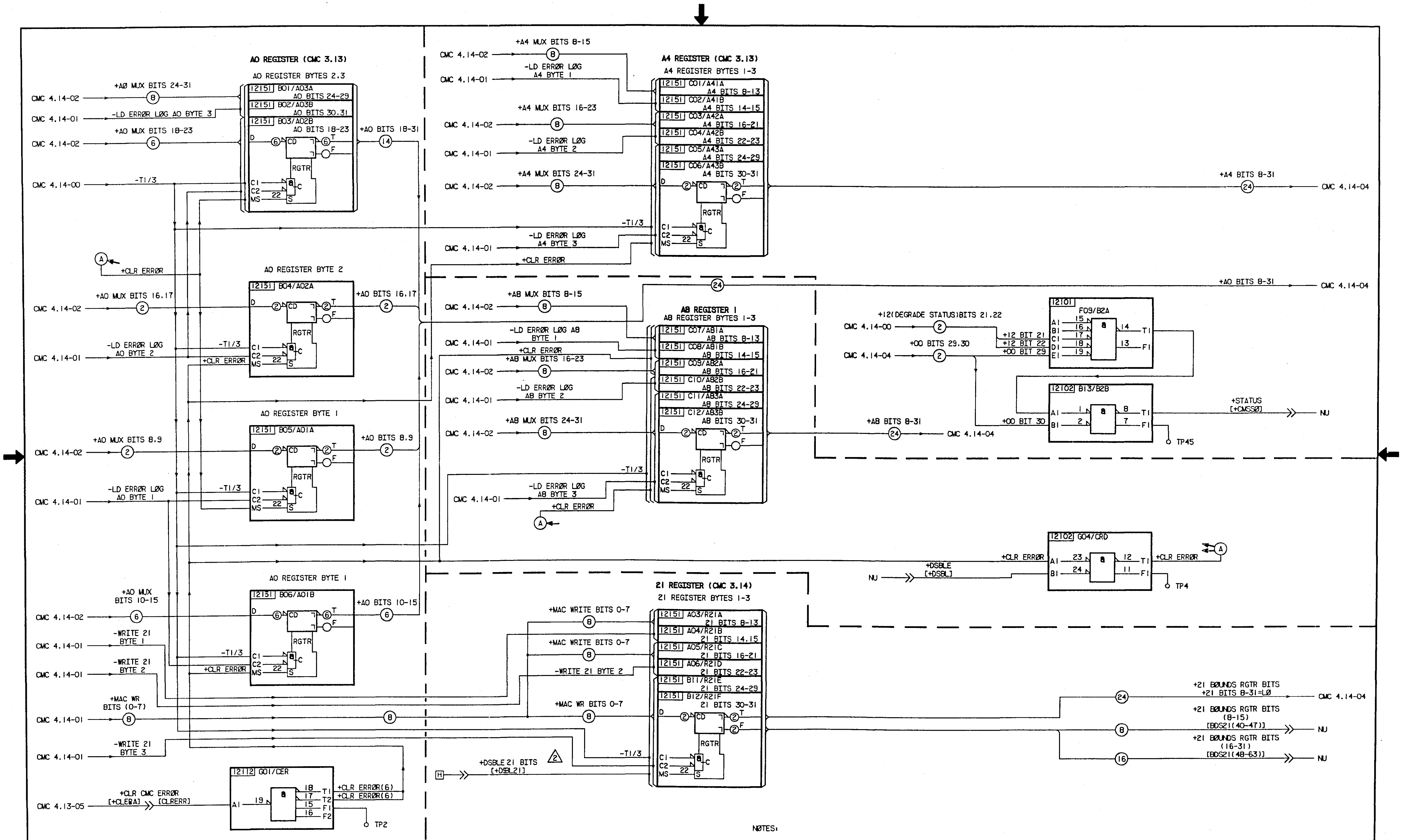
12155 LOC: F14 NAME: A8M6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-2	G14-2		A1	2	A8 MUX	8	T1	TERM	
PIC-181		T	B1	1	BIT 28	7	F1	C11-18	
C13-7	G14-4		A2	4	A8 MUX	5	T2	TERM	
PIC-173		T	B2	3	BIT 29	6	F2	C11-17	
C13-12	G14-16		A3	16	A8 MUX	13	T3	TERM	
PIC-161		T	B3	15	BIT 30	14	F3	C12-2	
C13-17	G14-18		A4	18	A8 MUX	12	T4	TERM	
PIC-165		T	B4	17	BIT 31	11	F4	C12-1	
G14-24		T	C1	24					
F13-23	E14-23		C2	23					
F14-19		T	E1	20					
F13-19	F14-20		E2	19					
			MS	22					

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.14-02
78TH; AIC/3TOO

AD112-C

DWG NO 60458190
REV J
SHEET CMC 4.14-02A
17-185



NOTES:

1. BACKUP CHARTS ARE ON PAGE CMC 4.14-03A CMC 4.14-03B.

2. UNTERMINATED LINES.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM - CMC 3.13
A0/A4/A8 REGISTER, 21 REGISTER
BYTES 1-3

7BTH:A1C/3T00
AD112-C

CAGE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.14-03	17-186

12151 LOC: B01 NAME: A03A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E13-7		T	D1	2	A0	3	T1	D12-4	
					BIT 24	4	F1	TERM	
E13-6		T	D2	1	A0	6	T2	D12-16	
					BIT 25	5	F2	TERM	
E13-14		T	D3	20	A0	8	T3	D13-24	
					BIT 26	7	F3	TERM	
E13-11		T	D4	19	A0	12	T4	D14-4	
					BIT 27	11	F4	TERM	
E14-7		T	D5	18	A0	14	T5	D14-16	
					BIT 28	13	F5	TERM	
E14-6		T	D6	17	A0	16	T6	E7-24	
					BIT 29	15	F6	TERM	
B2-24		T	C1	24					
F3-15	B2-23		C2	23					
G4-12	B2-22		MS	22					

12151 LOC: B02 NAME: A03B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E14-14		T	D1	2	A0	3	T1	E8-4	
					BIT 30	4	F1	TERM	
E14-11		T	D2	1	A0	6	T2	E8-16	
					BIT 31	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
G6-1	B1-24		C1	24					
B1-23		T	C2	23					
B1-22	B3-22		MS	22					

12151 LOC: B03 NAME: A02B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B8-14		T	D1	2	A0	3	T1	D8-4	
					BIT 18	4	F1	TERM	
B8-11		T	D2	1	A0	6	T2	D8-16	
					BIT 19	5	F2	TERM	
A8-7		T	D3	20	A0	8	T3	D9-24	
					BIT 20	7	F3	TERM	
A8-6		T	D4	19	A0	12	T4	D10-4	
					BIT 21	11	F4	TERM	
A8-14		T	D5	18	A0	14	T5	D10-16	
					BIT 22	13	F5	TERM	
A8-11		T	D6	17	A0	16	T6	D11-24	
					BIT 23	15	F6	TERM	
B4-24		T	C1	24					
F2-7	B4-23		C2	23					
B2-22	B5-22		MS	22					

12151 LOC: B04 NAME: A02A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B8-7		T	D1	2	A0	3	T1	D6-16	
					BIT 16	4	F1	TERM	
B8-6		T	D2	1	A0	6	T2	D7-24	
					BIT 17	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
G06-2	B3-24		C1	24					
B3-23		T	C2	23					
C4-22	B6-22		MS	22					

12151 LOC: B05 NAME: A01A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G11-7		T	D1	2	A0	3	T1	D1-24	
					BIT 8	4	F1	TERM	
G11-6		T	D2	1	A0	6	T2	D2-4	
					BIT 9	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
B6-24		T	C1	24					
F3-7	B6-23		C2	23					
B3-22	C10-22		MS	22					

12151 LOC: B06 NAME: A01B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G11-14		T	D1	2	A0	3	T1	D2-16	
					BIT 10	4	F1	TERM	
G11-11		T	D2	1	A0	6	T2	D3-24	
					BIT 11	5	F2	TERM	
G12-7		T	D3	20	A0	8	T3	D4-4	
					BIT 12	7	F3	TERM	
G12-6		T	D4	19	A0	12	T4	D4-16	
					BIT 13	11	F4	TERM	
G12-14		T	D5	18	A0	14	T5	D5-24	
					BIT 14	13	F5	TERM	
G12-11		T	D6	17	A0	16	T6	D6-4	
					BIT 15	15	F6	TERM	
G7-8	B5-24		C1	24					
B5-23		T	C2	23					
B4-22		T	MS	22					

12151 LOC: C01 NAME: A41A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B7-7		T	D1	2	A4	3	T1	D1-1	
					BIT 8	4	F1	TERM	
B7-6		T	D2	1	A4	6	T2	D2-5	
					BIT 9	5	F2	TERM	
B7-14		T	D3	20	A4	8	T3	D2-17	
					BIT 10	7	F3	TERM	
B7-11		T	D4	19	A4	12	T4	D3-1	
					BIT 11	11	F4	TERM	
A7-7		T	D5	18	A4	14	T5	D4-5	
					BIT 12	13	F5	TERM	
A7-6		T	D6	17	A4	16	T6	D4-17	
					BIT 13	15	F6	TERM	
C2-24		T	C1	24					
F3-6	C2-23		C2	23					
G1-18	C2-22		MS	22					

12151 LOC: C02 NAME: A41B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A7-14		T	D1	2	A4	3	T1	D5-1	
					BIT 14	4	F1	TERM	
A7-11		T	D2	1	A4	6	T2	D6-5	
					BIT 15	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
G6-8	C1-24		C1	24					
C1-23		T	C2	23					
C1-22	C3-22		MS	22					

12151 LOC: C03 NAME: A42A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B9-7		T	D1	2	A4	3	T1	D6-17	
					BIT 16	4	F1	TERM	
B9-6		T	D2	1	A4	6	T2	D7-1	
					BIT 17	5	F2	TERM	
B9-14		T	D3	20	A4	8	T3	D8-5	
					BIT 18	7	F3	TERM	
B9-11		T	D4	19	A4	12	T4	D8-17	
					BIT 19	11	F4	TERM	
A9-7		T	D5	18	A4	14	T5	D9-1	
					BIT 20	13	F5	TERM	
A9-6		T	D6	17	A4	16	T6	D10-5	
					BIT 21	15	F6	TERM	
C4-24		T	C1	24					
F2-6	C4-23		C2	23					
C2-22	C4-22		MS	22					

12151 LOC: C04 NAME: A42B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A9-14		T	D1	2	A4	3	T1	D10-17	
					BIT 22	4	F1	TERM	
A9-11		T	D2	1	A4	6	T2	D11-1	
					BIT 23	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
G6-7	C3-24		C1	24					
C3-23		T	C2	23					
C3-22	B4-22		MS	22					

12151 LOC: C05 NAME: A43A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G10-7		T	D1	2	A4	3	T1	D12-5	
					BIT 24	4	F1	TERM	
G10-6		T	D2	1	A4	6	T2	D12-17	
					BIT 25	5	F2	TERM	
G10-14		T	D3	20	A4	8	T3	D13-1	
					BIT 26	7	F3	TERM	
G10-11		T	D4	19	A4	12	T4	D14-5	
					BIT 27	11	F4	TERM	
F10-7		T	D5	18	A4	14	T5	D14-17	
					BIT 28	13	F5	TERM	
F10-6		T	D6	17	A4	16	T6	E7-1	
					BIT 29	15	F6	TERM	
C6-24		T	C1	24					
F3-14	C6-23		C2	23					
G4-23	C6-22		MS	22					

12151 LOC: C06 NAME: A43B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F10-14		T	D1	2	A4	3	T1	F8-5	
					BIT 30	4	F1	TERM	
F10-11		T	D2	1	A4	6	T2	E8-17	
					BIT 31	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
G7-7	C5-24		C1	24					
C5-23		T	C2	23					
C5-22	C7-22		MS	22					

12151 LOC: C07 NAME: A81A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G13-7		T	D1	2	A8	3	T1	D1-2	
					BIT 8	4	F1	TERM	
G13-6		T	D2	1	A8	6	T2	D2-6	
					BIT 9	5	F2	TERM	
G13-14		T	D3	20	A8	8	T3	D2-18	
					BIT 10	7	F3	TERM	
G13-11		T	D4	19	A8	12	T4	D3-2	
					BIT 11	11	F4	TERM	
G14-7		T	D5	18	A8	14	T5	D4-6	
					BIT 12	13	F5	TERM	
G14-6		T	D6	17	A8	16	T6	D4-18	
					BIT 13	15	F6	TERM	
G7-17	C8-24		C1	24					
G4-17	C8-23		C2	23					
C6-22	C8-22		MS	22					

12151 LOC: C08 NAME: A81B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G14-14		T	D1	2	A8	3	T1	D5-2	
					BIT 14	4	F1	TERM	
G14-11		T	D2	1	A8	6	T2	D6-6	
					BIT 15	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
C7-24		T	C1	24					
C7-23		T	C2	23					
C7-22	C9-22		MS	22					

12151 LOC: C09 NAME: A82A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B10-7		T	D1	2	A8	3	T1	D6-18	
					BIT 16	4	F1	TERM	
B10-6		T	D2	1	A8	6	T2	D7-2	
					BIT 17	5	F2	TERM	
B10-14		T	D3	20	A8	8	T3	D8-6	
					BIT 18	7	F3	TERM	
B10-11		T	D4	19	A8	12	T4	D8-18	
					BIT 19	11	F4	TERM	
A10-7		T	D5	18	A8	14	T5	D9-2	
					BIT 20	13	F5	TERM	
A10-6		T	D6	17	A8	16	T6	D10-6	
					BIT 21	15	F6	TERM	
G7-1	C10-24		C1	24					
F2-15	C10-23		C2	23					
C8-22		T	MS	22					

12151 LOC: C10 NAME: A82B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A10-14		T	D1	2	A8	3	T1	D10-18	
					BIT 22	4	F1	TERM	
A10-11		T	D2	1	A8	6	T2	D11-2	
					BIT 23	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
C9-24		T	C1	24					
C9-23		T	C2	23					
B5-22	C11-22		MS	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.14-03
7BTH; AIC/3T00
AD112-C

CODE IDENT 34010
D
DWG NO 60458180
REV J
SHEET CMC 4.14-03A
17-187

12151 LOC: C11 NAME: A83A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F13-7		T	D1	2	A8 BIT 24	3	T1	D12-6	
						4	F1	TERM	
F13-6		T	D2	1	A8 BIT 25	6	T2	D12-18	
						5	F2	TERM	
F13-14		T	D3	20	A8 BIT 26	8	T3	D13-2	
						7	F3	TERM	
F13-11		T	D4	19	A8 BIT 27	12	T4	D14-6	
						11	F4	TERM	
F14-7		T	D5	18	A8 BIT 28	14	T5	D14-18	
						13	F5	TERM	
F14-6		T	D6	17	A8 BIT 29	16	T6	E7-2	
						15	F6	TERM	
G7-2	C12-24		C1	24					
F3-11	C12-23		C2	23					
C10-22	C12-22		MS	22					

12151 LOC: A05 NAME: R21C

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B11-2	A03-2		D1	2	21 BIT 16	3	T1	D6-15	
						4	F1	P1B-01	
B11-1	A03-1		D2	1	21 BIT 17	6	T2	D7-23	
						5	F2	P1B-02	
B11-20	A03-20		D3	20	21 BIT 18	8	T3	D8-3	
						7	F3	P1B-03	
B11-19	A03-19		D4	19	21 BIT 19	12	T4	D8-15	
						11	F4	P1B-04	
B11-18	A03-18		D5	18	21 BIT 20	14	T5	D9-23	
						13	F5	P1B-06	
B11-17	A03-17		D6	17	21 BIT 21	16	T6	D10-3	
						15	F6	P1B-07	
A6-24		T	C1	24					
G4-15	A6-23		C2	23					
A4-22	A6-22		MS	22					

12151 LOC: C12 NAME: A83B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F14-14		T	D1	2	A8 BIT 30	3	T1	E8-6	
						4	F1	TERM	
F14-11		T	D2	1	A8 BIT 31	6	T2	E8-18	
						5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
C11-24		T	C1	24					
C11-23		T	C2	23					
C11-22		T	MS	22					

12151 LOC: A06 NAME: R21D

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B12-2	A4-2		D1	2	21 BIT 22	3	T1	D10-15	
						4	F1	P1B-08	
B12-1	A4-1		D2	1	21 BIT 23	6	T2	D11-23	
						5	F2	P1B-09	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
G7-12	A5-24		C1	24					
A5-23		T	C2	23					
A5-22	B11-22		MS	22					

12151 LOC: A03 NAME: R21A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A5-2		T	D1	2	21 BIT 8	3	T1	D1-23	
						4	F1	P1A-33	
A5-1		T	D2	1	21 BIT 9	6	T2	D2-3	
						5	F2	P1A-34	
A5-20		T	D3	20	21 BIT 10	8	T3	D2-15	
						7	F3	P1A-31	
A5-19		T	D4	19	21 BIT 11	12	T4	D3-23	
						11	F4	P1A-32	
A5-18		T	D5	18	21 BIT 12	14	T5	D4-3	
						13	F5	P1A-29	
A5-17		T	D6	17	21 BIT 13	16	T6	D4-15	
						15	F6	P1A-30	
A4-24		T	C1	24					
G4-6	A4-23		C2	23					
P2A-27	A4-22		MS	22					

12151 LOC: B11 NAME: R21E

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C14-3	A5-2		D1	2	21 BIT 24	3	T1	D12-3	
						4	F1	P1B-10	
C14-6	A5-1		D2	1	21 BIT 25	6	T2	D12-15	
						5	F2	P1B-11	
C14-13	A5-20		D3	20	21 BIT 26	8	T3	D13-23	
						7	F3	P1B-12	
C14-16	A5-19		D4	19	21 BIT 27	12	T4	D14-3	
						11	F4	P1B-13	
C13-3	A5-18		D5	18	21 BIT 28	14	T5	D14-15	
						13	F5	P1B-14	
C13-6	A5-17		D6	17	21 BIT 29	16	T6	E7-23	
						15	F6	P1B-15	
G7-18	B12-24		C1	24					
G4-14	B12-23		C2	23					
A6-22	B12-22		MS	22					

12151 LOC: A04 NAME: R21B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A6-2		T	D1	2	21 BIT 14	3	T1	D5-23	
						4	F1	P1A-27	
A6-1		T	D2	1	21 BIT 15	6	T2	D6-3	
						5	F2	P1A-28	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
G07-11	A3-24		C1	24					
A3-23		T	C2	23					
A3-22	A5-22		MS	22					

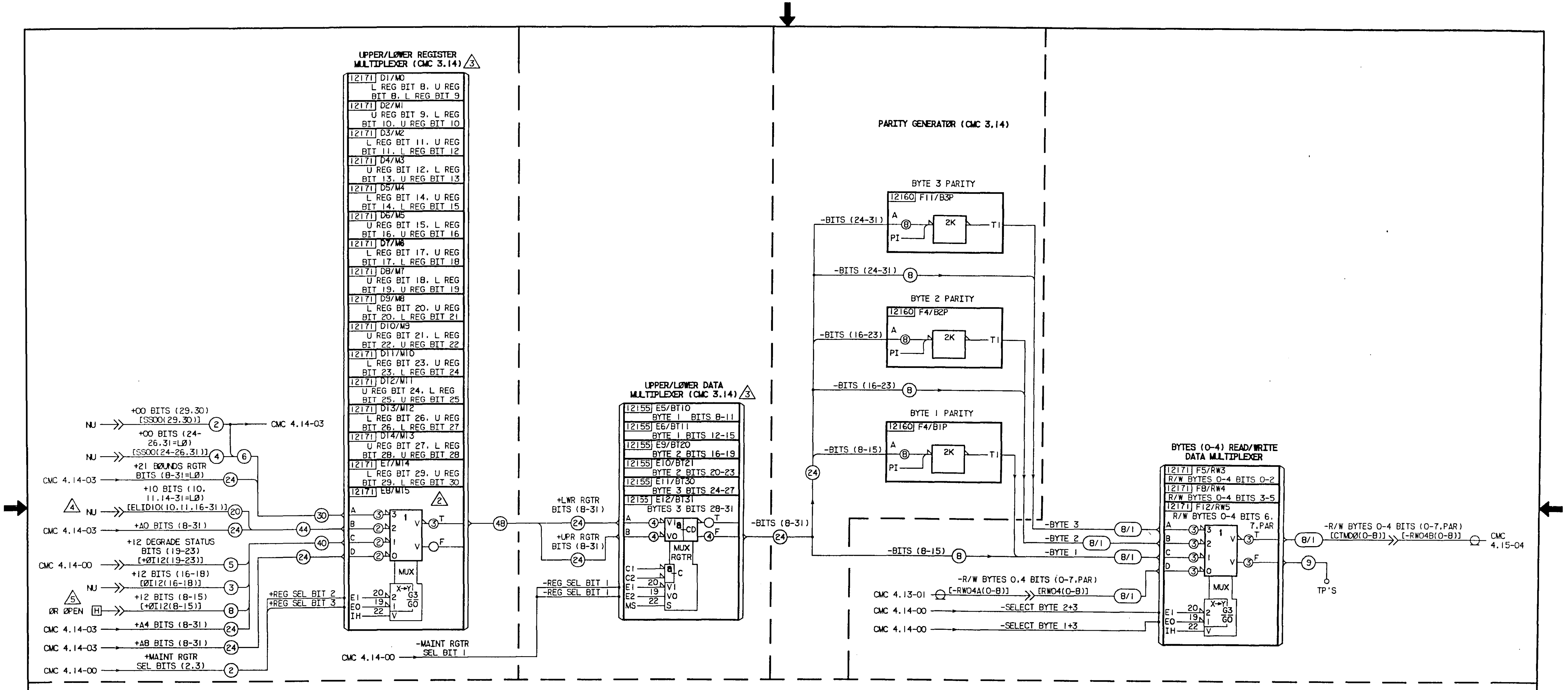
12151 LOC: B12 NAME: R21F

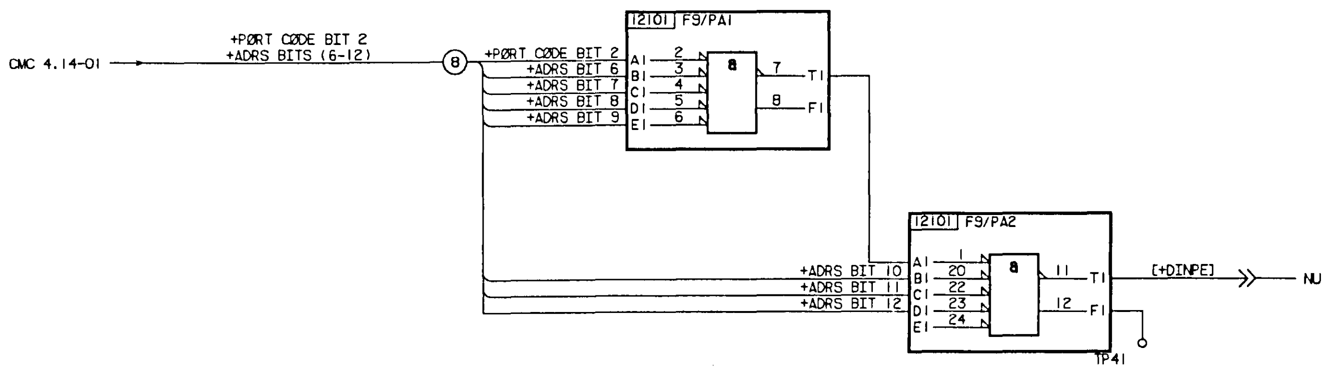
SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-13	A6-2		D1	2	21 BIT 30	3	T1	E8-3	
						4	F1	P1B-17	
C13-16	A6-1		D2	1	21 BIT 31	6	T2	E8-15	
						5	F2	P1B-18	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
B11-24		T	C1	24					
B11-23		T	C2	23					
B11-22		T	MS	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.14-03
7BTH; A1C/3T00
AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.14-03B
17-188


UPPER/LOWER REGISTER MULTIPLEXER (CMC 3.14) 3
12171 D1/M0 L REG BIT 8, U REG BIT 8, L REG BIT 9
12171 D2/M1 U REG BIT 9, L REG BIT 10, U REG BIT 10
12171 D3/M2 L REG BIT 11, U REG BIT 11, L REG BIT 12
12171 D4/M3 U REG BIT 12, L REG BIT 13, U REG BIT 13
12171 D5/M4 L REG BIT 14, U REG BIT 14, L REG BIT 15
12171 D6/M5 U REG BIT 15, L REG BIT 16, U REG BIT 16
12171 D7/M6 L REG BIT 17, U REG BIT 17, L REG BIT 18
12171 D8/M7 U REG BIT 18, L REG BIT 19, U REG BIT 19
12171 D9/M8 L REG BIT 20, U REG BIT 20, L REG BIT 21
12171 D10/M9 U REG BIT 21, L REG BIT 22, U REG BIT 22
12171 D11/M10 L REG BIT 23, U REG BIT 23, L REG BIT 24
12171 D12/M11 U REG BIT 24, L REG BIT 25, U REG BIT 25
12171 D13/M12 L REG BIT 26, U REG BIT 26, L REG BIT 27
12171 D14/M13 U REG BIT 27, L REG BIT 28, U REG BIT 28
12171 E7/M14 L REG BIT 29, U REG BIT 29, L REG BIT 30
12171 E8/M15 2
A B C D 3 2 1 0 V T F MUX X→Y G3 G0 EI EO IH 20 19 22
NU +00 BITS (29,30) [SS00(29,30)] 2 CMC 4.14-03
NU +00 BITS (24-26,31=LO) [SS00(24-26,31)] 4 6
CMC 4.14-03 +21 BOUNDS RGTR BITS (8-31=LO) 24
4 NU +10 BITS (10,11,14-31=LO) [ELIDIO(10,11,16-31)] 20
CMC 4.14-03 +A0 BITS (8-31) 24
CMC 4.14-00 +12 DEGRADE STATUS BITS (19-23) [+OI12(19-23)] 5
NU +12 BITS (16-18) [OI12(16-18)] 3
5 OR OPEN H +12 BITS (8-15) [+OI12(8-15)] 8
CMC 4.14-03 +A4 BITS (8-31) 24
CMC 4.14-03 +A8 BITS (8-31) 24
CMC 4.14-00 +MAINT RGTR SEL BITS (2,3) 2
30 44 40 24 48
+REG SEL BIT 2
+REG SEL BIT 3
CMC 4.14-00 -MAINT RGTR SEL BIT 1
UPPER/LOWER DATA MULTIPLEXER (CMC 3.14) 3
12155 E5/BT10 BYTE 1 BITS 8-11
12155 E6/BT11 BYTE 1 BITS 12-15
12155 E9/BT20 BYTE 2 BITS 16-19
12155 E10/BT21 BYTE 2 BITS 20-23
12155 E11/BT30 BYTE 3 BITS 24-27
12155 E12/BT31 BYTES 3 BITS 28-31
A B V1 V0 CD T F MUX RGTR C1 C2 E1 E2 MS C S 20 19 22
+LWR RGTR BITS (8-31) 24
+UPR RGTR BITS (8-31) 24
-REG SEL BIT 1
-REG SEL BIT 1
-BITS (8-31) 24
PARITY GENERATOR (CMC 3.14)
BYTE 3 PARITY 12160 F11/B3P A PI 2K T1
-BITS (24-31)
-BITS (24-31) 8
BYTE 2 PARITY 12160 F4/B2P A PI 2K T1
-BITS (16-23)
-BITS (16-23) 8
BYTE 1 PARITY 12160 F4/B1P A PI 2K T1
-BITS (8-15)
-BITS (8-15) 8
-BYTE 3 8/1
-BYTE 2 8/1
-BYTE 1 8/1
CMC 4.13-01 -R/W BYTES 0,4 BITS (0-7,PAR) [-RW04A(0-8)] [RW04(0-8)] 8/1
CMC 4.14-00 -SELECT BYTE 2+3
CMC 4.14-00 -SELECT BYTE 1+3
BYTES (0-4) READ/WRITE DATA MULTIPLEXER
12171 F5/RW3 R/W BYTES 0-4 BITS 0-2
12171 F8/RW4 R/W BYTES 0-4 BITS 3-5
12171 F12/RW5 R/W BYTES 0-4 BITS 6, 7,PAR
A B C D 3 2 1 0 V T F MUX X→Y G3 G0 EI EO IH 20 19 22
8/1 -R/W BYTES 0-4 BITS (0-7,PAR) [CTMD0(0-8)] [-RW04B(0-8)] CMC 4.15-04
9 TP'S



NOTES:

1. BACKUP CHARTS ARE ON PAGE CMC 4.14-04A, 4.14.-04B.

2. U REG BIT 30, L REG BIT 31, U REG BIT 31.

3.

		12171 VIRTUAL INPUT PIN	SOURCE REGISTER
LOWER REG MULTIPLEXER BITS	{	A	00
		B	10
		C	12
		D	20
UPPER REG MULTIPLEXER BITS	{	A	21
		B	A0
		C	A4
		D	A8

4. UNTERMINATED LINES.

5. OI12(9,11) TIED HI; OI12(8,10,12-15) UNTERMINATED.

CONTROL DATA CORPORATION DEVELOPMENT DIVISION	LEVEL 4 DIAGRAM-CMC 3.14 UPPER/LOWER REGISTER MULTIPLEXER, UPPER/LOWER DATA MULTIPLEXER, PARITY GENERATOR 7BTH,A1C/3T00 AD112-C	CODE IDENT	DWG NO 60458190	REV J
		SHEET CMC 4.14-04		PAGE 17-189

12171 LOC: D1 NAME: M0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L REG BIT 8	7	T1	E5-2	
			B1	4		8	F1	TERM	
P2A-28			C1	5					
			D1	6					
A3-3		T	A2	23	U REG BIT 8	11	T2	E5-1	
B5-3		T	B2	24		12	F2	TERM	
C1-3		T	C2	1					
C7-3		T	D2	2					
			A3	15	L REG BIT 9	14	T3	E5-4	
			B3	16		13	F3	TERM	
P2A-26			C3	17					
			D3	18					
G1-6	D2-20		E1	20					
G1-14	D2-19		E0	19					
			IH	22					

12171 LOC: D05 NAME: M4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L REG BIT 14	7	T1	E6-16	
P1C-39		T	B1	4		8	F1	TERM	
P2A-19			C1	5					
			D1	6					
A4-3		T	A2	23	U REG BIT 14	11	T2	E6-15	
B6-14		T	B2	24		12	F2	TERM	
C2-3		T	C2	1					
C8-3		T	D2	2					
			A3	15	L REG BIT 15	14	T3	E6-18	
P1C-40		T	B3	16		13	F3	TERM	
P2A-20			C3	17					
			D3	18					
D4-20		T	E1	20					
D4-19		T	E0	19					
			IH	22					

12171 LOC: D09 NAME: M8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L REG BIT 20	7	T1	E10-2	
P2B-28			B1	4		8	F1	TERM	
P1A-17		T	C1	5					
			D1	6					
A5-14		T	A2	23	U REG BIT 20	11	T2	E10-1	
B3-8		T	B2	24		12	F2	TERM	
C3-14		T	C2	1					
C9-14		T	D2	2					
			A3	15	L REG BIT 21	14	T3	E10-4	
P2B-29			B3	16		13	F3	TERM	
P1A-15		T	C3	17					
			D3	18					
D8-20	D10-20		E1	20					
D8-19	D10-19		E0	19					
			IH	22					

12171 LOC: D13 NAME: M12

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-12		T	A1	3	L REG BIT 26	7	T1	E11-16	
P2B-34			B1	4		8	F1	TERM	
			C1	5					
			D1	6					
B11-8		T	A2	23	U REG BIT 26	11	T2	E11-15	
B1-8		T	B2	24		12	F2	TERM	
C5-8		T	C2	1					
C11-8		T	D2	2					
			A3	15	L REG BIT 27	14	T3	E11-18	
P2B-35			B3	16		13	F3	TERM	
			C3	17					
			D3	18					
D12-20	D14-20		E1	20					
D12-19	D14-19		E0	19					
			IH	22					

12171 LOC: D02 NAME: M1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A3-6		T	A1	3	U REG BIT 9	7	T1	E5-3	
B5-6		T	B1	4		8	F1	TERM	
C1-6		T	C1	5					
C7-6		T	D1	6					
			A2	23	L REG BIT 10	11	T2	E5-16	
P2B-21			B2	24		12	F2	TERM	
P2A-23			C2	1					
			D2	2					
A3-8		T	A3	15	U REG BIT 10	14	T3	E5-15	
B6-3		T	B3	16		13	F3	TERM	
C1-8		T	C3	17					
C7-8		T	D3	18					
D1-20	D3-20		E1	20					
D1-19	D3-19		E0	19					
			IH	22					

12171 LOC: D06 NAME: M5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A4-6		T	A1	3	U REG BIT 15	7	T1	E6-17	
B6-16		T	B1	4		8	F1	TERM	
C2-6		T	C1	5					
C8-6		T	D1	6					
			A2	23	L REG BIT 16	11	T2	E9-2	
P2B-23			B2	24		12	F2	TERM	
P1A-20		T	C2	1					
			D2	2					
A5-3		T	A3	15	U REG BIT 16	14	T3	E9-1	
B4-3		T	B3	16		13	F3	TERM	
C3-3		T	C3	17					
C9-3		T	D3	18					
G1-5	D7-20		E1	20					
G1-13	D7-19		E0	19					
			IH	22					

12171 LOC: D10 NAME: M9

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A5-16		T	A1	3	U REG BIT 21	7	T1	E10-3	
B3-12		T	B1	4		8	F1	TERM	
C3-16		T	C1	5					
C9-16		T	D1	6					
			A2	23	L REG BIT 22	11	T2	E10-16	
P2B-30			B2	24		12	F2	TERM	
P1A-13		T	C2	1					
			D2	2					
A6-3		T	A3	15	U REG BIT 22	14	T3	E10-15	
B3-14		T	B3	16		13	F3	TERM	
C4-3		T	C3	17					
C10-3		T	D3	18					
D9-20		T	E1	20					
D9-19		T	E0	19					
			IH	22					

12171 LOC: D14 NAME: M13

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B11-12		T	A1	3	U REG BIT 27	7	T1	E11-17	
B1-12		T	B1	4		8	F1	TERM	
C5-12		T	C1	5					
C11-12		T	D1	6					
			A2	23	L REG BIT 28	11	T2	E12-2	
P2B-37			B2	24		12	F2	TERM	
			C2	1					
			D2	2					
B11-14		T	A3	15	U REG BIT 28	14	T3	E12-1	
B1-14		T	B3	16		13	F3	TERM	
C5-14		T	C3	17					
C11-14		T	D3	18					
D13-20		T	E1	20					
D13-19		T	E0	19					
			IH	22					

12171 LOC: D03 NAME: M2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L REG BIT 11	7	T1	E5-18	
P2B-22			B1	4		8	F1	TERM	
P2A-24			C1	5					
			D1	6					
A3-12		T	A2	23	U REG BIT 11	11	T2	E5-17	
B6-6		T	B2	24		12	F2	TERM	
C1-12		T	C2	1					
C7-12		T	D2	2					
			A3	15	L REG BIT 12	14	T3	E6-2	
			B3	16		13	F3	TERM	
P2A-21			C3	17					
			D3	18					
D2-20	D4-20		E1	20					
D2-19	D4-19		E0	19					
			IH	22					

12171 LOC: D07 NAME: M6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L REG BIT .17	7	T1	E9-4	
P2B-24			B1	4		8	F1	TERM	
P1A-18			C1	5					
			D1	6					
A5-6		T	A2	23	U REG BIT 17	11	T2	E9-3	
B4-6		T	B2	24		12	F2	TERM	
C3-6		T	C2	1					
C9-6		T	D2	2					
			A3	15	L REG BIT 18	14	T3	E9-16	
P2B-26			B3	16		13	F3	TERM	
P1A-14			C3	17					
			D3	18					
D6-20	D8-20		E1	20					
D6-19	D8-19		E0	19					
			IH	22					

12171 LOC: D11 NAME: M10

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L REG BIT 23	7	T1	E10-18	
P2B-31			B1	4		8	F1	TERM	
P1A-11			C1	5					
			D1	6					
A6-6		T	A2	23	U REG BIT 23	11	T2	E10-17	
B3-16		T	B2	24		12	F2	TERM	
C4-6		T	C2	1					
C10-6		T	D2	2					
P1A-09		T	A3	15	L REG BIT 24	14	T3	E11-2	
P2B-32			B3	16		13	F3	TERM	
			C3	17					
			D3	18					
E8-20	D12-20		E1	20					
E8-19	D12-19		E0	19					
			IH	22					

12171 LOC: E07 NAME: M14

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-13	F9-19		A1	3	L REG BIT 29	7	T1	E12-4	
P2B-38			B1	4		8	F1	TERM	
			C1	5					
			D1	6					
B11-16		T	A2	23	U REG BIT 29	11	T2	E12-3	
B1-16		T	B2	24		12	F2	TERM	
C5-16		T	C2	1					
C11-16		T	D2	2					
P2A-14	B13-2		A3	15	L REG BIT 30	14	T3	E12-16	
P2B-39			B3	16		13	F3	TERM	
			C3	17					
			D3	18					
E1-14	E8-20		E1	20					
E1-11	E8-19		E0	19					
			IH	22					

12171 LOC: D04 NAME: M3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A3-14		T	A1	3	U REG BIT 12	7	T1	E6-1	
B6-8		T	B1	4		8	F1	TERM	
C1-14		T	C1	5					
C7-14		T	D1	6					
			A2	23	L REG BIT 13	11	T2	E6-4	
			B2	24		12	F2	TERM	
P2A-22			C2	1					
			D2	2					
A3-16		T	A3	15	U REG BIT 13	14	T3	E6-3	
B6-12		T	B3	16		13	F3	TERM	
C1-16		T	C3	17					
C7-16		T	D3	18					
D3-20	D5-20		E1	20					
D3-19	D5-19		E0	19					
			IH	22					

12171 LOC: D08 NAME: M7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A5-8		T	A1	3	U REG BIT 18	7	T1	E9-15	
B3-3		T	B1	4		8	F1	TERM	
C3-8		T	C1	5					
C9-8		T	D1	6					
			A2	23	L REG BIT 19	11	T2	E9-18	
P2B-27			B2	24		12	F2	TERM	
P1A-19		T	C2	1					
			D2	2					
A5-12		T	A3	15	U REG BIT 19	14	T3	E9-17	
B3-6		T	B3	16		13	F3	TERM	
C3-12		T	C3	17					
C9-12		T	D3	18					
D7-20	D9-20		E1	20					
D7-19	D9-10		E0	19					
			IH	22					

12171 LOC: D12 NAME: M11

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B11-3		T	A1	3	U REG BIT 24	7	T1	E11-1	
B1-3		T	B1	4		8	F1	TERM	
C5-3		T	C1	5					
C11-3		T	D1	6					
P1A-07		T	A2	23	L REG BIT 25	11	T2	E11-4	
P2B-33			B2	24		12	F2	TERM	
			C2	1					
			D2	2					
B11-6		T	A3	15	U REG BIT 25	14	T3	E11-3	
B1-6		T	B3	16		13	F3	TERM	
C5-6		T	C3	17					
C11-6		T	D3	18					
D11-20	D13-20		E1	20					
D11-19	D13-19		E0	19					
			IH	22					

12171 LOC: E08 NAME: M15

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B12-3		T	A1	3	U REG BIT 30	7	T1	E12-15	
B2-3		T	B1	4		8	F1	TERM	
C6-3		T	C1	5					
C12-3		T	D1	6					
P1A-10		T	A2	23	L REG BIT 31	11	T2	E12-18	
P2B-40			B2	24		12	F2	TERM	
			C2	1					
			D2	2					
B12-6		T	A3	15	U REG BIT 31	14	T3	E12-17	
B2-6		T	B3	16		13	F3	TERM	
C6-6		T	C3	17					
C12-6		T	D3	18					
E7-20	D11-20		E1	20					
E7-19	D11-19		E0	19					
			IH	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.14-04
78TH; AIC/3T00
AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.14-04A 17-190

12155 LOC: E5 NAME: BT10

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D1-7		T	A1	2	BYTE 1 BIT 8	8	T1	TERM	
D1-11		T	B1	1		7	F1	F5-5	
D1-14		T	A2	4	BYTE 1 BIT 9	5	T2	TERM	
D2-7		T	B2	3		6	F2	F5-1	
D2-11		T	A3	16	BYTE 1 BIT 10	13	T3	TERM	
D2-14		T	B3	15		14	F3	F5-17	
D3-7		T	A4	18	BYTE 1 BIT 11	12	T4	TERM	
D3-11		T	B4	17		11	F4	F4-4	
			C1	24					
			C2	23					
G1-1	E5-19		E1	20					
E5-20	E6-19		E2	19					
			MS	22					

12155 LOC: E6 NAME: BT11

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D3-14		T	A1	2	BYTE 1 BIT 12	8	T1	TERM	
D4-7		T	B1	1		7	F1	F4-5	
D4-11		T	A2	4	BYTE 1 BIT 13	5	T2	TERM	
D4-14		T	B2	3		6	F2	F4-22	
D5-7		T	A3	16	BYTE 1 BIT 14	13	T3	TERM	
D5-11		T	B3	15		14	F3	F4-23	
D5-14		T	A4	18	BYTE 1 BIT 15	12	T4	TERM	
D6-7		T	B4	17		11	F4	F4-24	
			C1	24					
			C2	23					
E6-19	E9-20		E1	20					
E5-19	E6-20		E2	19					
			MS	22					

12155 LOC: E9 NAME: BT20

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D6-11		T	A1	2	BYTE 2 BIT 16	8	T1	TERM	
D6-14		T	B1	1		7	F1	F5-4	
D7-7		T	A2	4	BYTE 2 BIT 17	5	T2	TERM	
D7-11		T	B2	3		6	F2	F5-24	
D7-14		T	A3	16	BYTE 2 BIT 18	13	T3	TERM	
D8-7		T	B3	15		14	F3	F5-16	
D8-11		T	A4	18	BYTE 2 BIT 19	12	T4	TERM	
D8-14		T	B4	17		11	F4	F8-4	
			C1	24					
			C2	23					
E6-20	E9-19		E1	20					
E9-20		T	E2	19					
			MS	22					

12155 LOC: E10 NAME: BT21

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D9-7		T	A1	2	BYTE 2 BIT 20	8	T1	TERM	
D9-11		T	B1	1		7	F1	F8-24	
D9-14		T	A2	4	BYTE 2 BIT 21	5	T2	TERM	
D10-7		T	B2	3		6	F2	F8-16	
D10-11		T	A3	16	BYTE 2 BIT 22	13	T3	TERM	
D10-14		T	B3	15		14	F3	F12-4	
D11-7		T	A4	18	BYTE 2 BIT 23	12	T4	TERM	
D11-11		T	B4	17		11	F4	F12-24	
			C1	24					
			C2	23					
G1-2	E10-19		E1	20					
E10-20	E11-19		E2	19					
			MS	22					

12155 LOC: E11 NAME: BT30

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D11-14		T	A1	2	BYTE 3 BIT 24	8	T1	TERM	
D12-7		T	B1	1		7	F1	F11-1	
D12-11		T	A2	4	BYTE 3 BIT 25	5	T2	TERM	
D12-14		T	B2	3		6	F2	F11-2	
D13-7		T	A3	16	BYTE 3 BIT 26	13	T3	TERM	
D13-11		T	B3	15		14	F3	F11-3	
D13-14		T	A4	18	BYTE 3 BIT 27	12	T4	TERM	
D14-7		T	B4	17		11	F4	F11-4	
			C1	24					
			C2	23					
E11-19	E12-20		E1	20					
E10-19	E11-20		E2	19					
			MS	22					

12155 LOC: E12 NAME: BT31

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D14-11		T	A1	2	BYTE 3 BIT 28	8	T1	TERM	
D14-14		T	B1	1		7	F1	F11-5	
E7-7		T	A2	4	BYTE 3 BIT 29	5	T2	TERM	
E7-11		T	B2	3		6	F2	F11-22	
E7-14		T	A3	16	BYTE 3 BIT 30	13	T3	TERM	
E8-7		T	B3	15		14	F3	F12-3	
E8-11		T	A4	18	BYTE 3 BIT 31	12	T4	TERM	
E8-14		T	B4	17		11	F4	F11-24	
			C1	24					
			C2	23					
E11-20	E12-19		E1	20					
E12-20		T	E2	19					
			MS	22					

12160 LOC: F11 NAME: B3P

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E11-7	F5-3		A1	1	BIT 24	7	T1	F12-15	
E11-6	F5-23		A2	2	BIT 25				
E11-14	F5-15		A3	3	BIT 26				
E11-11	F8-3		A4	4	BIT 27				
E12-7	F8-23		A5	5	BIT 28				
E12-6	F8-15		A6	22	BIT 29				
F12-3		T	A7	23	BIT 30				
E12-11	F12-23		A8	24	BIT 31				
			PI	6					

12160 LOC: F4 NAME: B2P

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F5-4		T	A1	13	BIT 16	11	T1	F12-16	
F5-24		T	A2	14	BIT 17				
F5-16		T	A3	15	BIT 18				
F8-4		T	A4	16	BIT 19				
F8-24		T	A5	17	BIT 20				
F8-16		T	A6	18	BIT 21				
F12-4		T	A7	19	BIT 22				
F12-24		T	A8	20	BIT 23				
			PI	12					

12160 LOC: F4 NAME: B1P

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F5-5		T	A1	1	BIT 8	7	T1	F12-17	
F5-1		T	A2	2	BIT 9				
F5-17		T	A3	3	BIT 10				
E5-11	F8-5		A4	4	BIT 11				
E6-7	F8-1		A5	5	BIT 12				
E6-6	F8-17		A6	22	BIT 13				
E6-14	F12-5		A7	23	BIT 14				
E6-11	F12-1		A8	24	BIT 15				
			PI	6					

12171 LOC: F5 NAME: RW3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F11-1		T	A1	3	R/W BYTES 0-4 BIT 0	7	T1	PIC-60	
E9-7	F4-13		B1	4		8	F1	TP-32	
E5-7	F4-1		C1	5					
PIC-59		T	D1	6					
F11-2		T	A2	23	R/W BYTES 0-4 BIT 1	11	T2	PIC-55	
E9-6	F4-14		B2	24		12	F2	TP-33	
E5-6	F4-2		C2	1					
PIC-63		T	D2	2					
F11-3		T	A3	15	R/W BYTES 0-4 BIT 2	14	T3	PIC-64	
E9-14	F4-15		B3	16		13	F3	TP-35	
E5-14	F4-3		C3	17					
PIC-68		T	D3	18					
E4-12	F8-20		E1	20					
E4-13	F8-19		E0	19					
			IH	22					

12171 LOC: F8 NAME: RW4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E11-11		T	A1	3	R/W BYTES 0-4 BIT 3	7	T1	PIC-79	
E9-11	F4-16		B1	4		8	F1	TP-38	
F4-4		T	C1	5					
PIC-88		T	D1	6					
F11-5		T	A2	23	R/W BYTES 0-4 BIT 4	11	T2	PIC-80	
E10-7	F4-17		B2	24		12	F2	TP-37	
F4-5		T	C2	1					
PIC-91		T	D2	2					
F11-22		T	A3	15	R/W BYTES 0-4 BIT 5	14	T3	PIC-87	
E10-6	F4-18		B3	16		13	F3	TP-39	
F4-22		T	C3	17					
PIC-98		T	D3	18					
F5-20	F12-20		E1	20					
F5-19	F12-19		E0	19					
			IH	22					

12171 LOC: F12 NAME: RW5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E12-14	F11-23		A1	3	R/W BYTES 0-4 BIT 6	7	T1	PIC-138	
E10-14	F4-19		B1	4		8	F1	TP-43	
F4-23		T	C1	5					
PIC-137		T	D1	6					
F11-24		T	A2	23	R/W BYTES 0-4 BIT 7	11	T2	PIC-133	
E10-11	F4-20		B2	24		12	F2	TP-42	
F4-24		T	C2	1					
PIC-150		T	D2	2					
F11-7		T	A3	15	R/W BYTES 0-4 PARITY	14	T3	PIC-186	
F4-11		T	B3	16		13	F3	TP-44	
F4-7		T	C3	17					
PIC-185		T	D3	18					
F8-20		T	E1	20					
F8-19		T	E0	19					
			IH	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.14-04
78TH; A1C/3T00
AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.14-048
17-191

LEFT ZIF △1

BIT NAME		I/O	SHEET CMC 4.14-	TYPE	VIRTUAL PIN	REAL PIN
CSUCNP(0)	CSUCNP (0)	I	00	D	T05	P2A-39
CSUCN(0)	CSUCN (0)				06	40
(1)	(1)				07	37
(1)	(1)				08	38
(2)	(2)				09	33
(2)	(2)				0A	35
(3)	(3)				0B	32
↓ (3)	↓ (3)				0C	34
CSUCNP(4)	CSUCNP (4)		↓	↓	0D	29
CSUCN(4)	CSUCN (4)		00	D	0E	31
LELA0A	LELA0A		01	Z	16	07
LELA4A	LELA4A				17	↓ 08
LELA8A	LELA8A				18	P2A-10
A16DPE(6)	ADRS (6)				22	P1A-35
(7)	(7)				23	37
(8)	(8)				24	38
(9)	(9)				25	↓ 39
(10)	(10)				26	P1A-40
↓ (11)	↓ (11)		↓		27	P2A-01
A16DPE(12)	ADRS (12)		01		28	02
CLRERR	CLERA		03		59	18
DSBL21	DSBL21		↓		5A	27
DSBL	DSBL		03		5B	30
SS00(29)	NU		04		5C	↓ 13
(30)					5D	P2A-14
(24)					5E	P1A-09
(25)					5F	07
↓ (26)					60	↓ 12
SS00(31)	↓				61	P1A-10
OI12(8)	NU				74	P2A-28
(9)	OI12 (9)				75	26
(10)	NU				76	23
(11)	OI12 (11)				77	24
(12)	NU				78	21
(13)					79	22
(14)	↓				7A	↓ 19
(15)	NU				7B	P2A-20
(16)	OI12 (16)				7C	P1A-20
(17)	NU				7D	18
(18)	NU				7E	14
(19)	OI12 (19)				7F	19
(20)	(20)				80	17
(21)	↓ (21)				81	15
↓ (22)	OI12 (22)	↓	↓		82	13
OI12(23)	NU	I	04		B3	11
OI12O(16)	OI12 (16)	O	00		A0	26
(19)	(19)				A1	23
(20)	(20)				A2	21
↓ (21)	↓ (21)		↓		A3	↓ 24
OI12O(22)	OI12 (22)		00		A4	P1A-22
WRNBO(1)	NU		01		A5	P2A-06
↓ (2)	WRNBO (2)				A6	04
WRNBO(3)	WRNBO (3)				A7	03
LELA0B	LELA0B				A8	09
LELA4B	LELA4B		↓		A9	↓ 11
LELA8B	LELA8B		01		AA	P2A-12
BDS21(40)	NU		03		BC	P1A-33
(41)					BD	34
(42)					BE	31
(43)					BF	32
(44)					C0	29
(45)					C1	30
↓ (46)	↓	↓	↓	↓	↓ C2	↓ 27
BDS21(47)	NU	O	03	Z	T C3	P1A-28

ZIF GROUND PINS			
P1A-05	P1A-25	P2A-05	P2A-25
P1A-16	P1A-36	P2A-16	P2A-36

COAX △1

BIT NAME		I/O	SHEET CMC 4.14-	TYPE	VIRTUAL PIN	REAL PIN
MCK	NCLKN (390)	I	00	C	T00	P1C-71
PHM	CLKPM (67)				01	67
RGSL(0)	RGSLA (0)				11	52
(1)	(1)				12	07
↓ (2)	↓ (2)		↓		13	12
RGSL(3)	RGSLA (3)		00		14	08
PCDDPE	PRTCD (2)		01		21	51
PC2SYN	PTCD (2)		02		29	125
ADRSYN(6)	ADRS (6)				2A	129
(7)	(7)				2B	145
(8)	(8)				2C	141
(9)	(9)				2D	142
(10)	(10)				2E	146
↓ (11)	↓ (11)				2F	97
ADRSYN(12)	ADRS (12)				30	92
PTPECD(0)	PRTCD (0)				31	134
PTPECD(1)	PRTCD (1)				32	130
PTCD18(0)	PTCD18 (0)				33	162
↓ (1)	↓ (1)				34	158
PTCD18(2)	PTCD18 (2)				35	153
ADRS18(6)	ADRS18 (6)				36	157
(7)	(7)				37	182
(8)	(8)				38	178
(9)	(9)				39	166
(10)	(10)				3A	177
(11)	(11)				41	126
(12)	(12)				42	121
(13)	(13)				43	109
(14)	(14)				44	114
(15)	(15)				45	122
(16)	(16)				46	117
(17)	(17)				47	113
(18)	(18)				48	118
(19)	(19)				51	170
(20)	(20)				52	169
(21)	(21)				53	154
(22)	(22)				54	174
(23)	(23)				55	181
(24)	(24)				56	173
↓ (25)	↓ (25)		↓		57	161
ADRSIB(26)	ADRSIB (26)		02		58	165
RW04(0)	RW04A (0)		04		84	59
(1)	(1)				85	63
(2)	(2)				86	68
(3)	(3)				87	88
(4)	(4)				88	91
(5)	(5)				89	98
(6)	(6)				8A	137
↓ (7)	↓ (7)	↓	↓		8B	150
RW04(8)	RW04A (8)	I	04		8C	185
PC2DPE	PC2	O	01		B3	75
ADRDPE(6)	ADRS (6)				B4	102
(7)	(7)				B5	83
(8)	(8)				B6	101
(9)	(9)				B7	76
(10)	(10)				B8	84
↓ (11)	↓ (11)		↓		B9	105
ADRDPE(12)	ADRS (12)		01		BA	110
CMSSO	NU		03		BB	149
DINPE	NU		04		D4	106
CTMDO(0)	RW04B (0)				D5	60
(1)	(1)				D6	55
(2)	(2)				D7	64
(3)	(3)				D8	79
(4)	(4)				D9	80
(5)	(5)				DA	87
(6)	(6)				DB	138
↓ (7)	↓ (7)	↓	↓		DC	133
CTMDO(8)	RW04B (8)	O	04	↓	↓ DD	↓ 186
RGSLP	RGSLPA (0)	I	01	C	T 15	P1C-56
ELIDIO(14)	ELIDIO(14)	I	04	C	X00	P1C-39
ELIDIO(15)	ELIDIO(15)	I	04	C	X01	P1C-40

RIGHT ZIF △1

BIT NAME		I/O	SHEET CMC 4.14-	TYPE	VIRTUAL PIN	REAL PIN
BYTSL(0)	BYTSLA (0)	I	00	Z	T02	P2B-08
↓ (1)	(1)				03	↓ 09
BYTSL(2)	BYTSLA (2)				04	P2B-10
WRTP	WRTP(A)		↓		0F	P1B-39
WRT	WRT(A)		00		10	40
MCWRTA(0)	MCWRTA (0)		01		19	29
(1)	(1)				1A	31
(2)	(2)				1B	32
(3)	(3)				1C	33
(4)	(4)				1D	34
(5)	(5)				1E	35
↓ (6)	↓ (6)		↓		1F	↓ 37
MCWRTA(7)	MCWRTA (7)		01		20	P1B-38
ADRS(13)	ADRS (13)		02		3B	P2B-11
(14)	(14)				3C	12
(15)	(15)				3D	13
(16)	(16)				3E	14
(17)	(17)				3F	15
(18)	(18)				40	17
(19)	(19)				49	18
(20)	(20)				4A	19
(21)	(21)				4B	20
(22)	(22)				4C	01
(23)	(23)				4D	02
(24)	(24)				4E	03
↓ (25)	↓ (25)		↓		4F	04
ADRS(26)	ADRS (26)		02		50	06
ELIDIO(10)	NU		04		62	21
(11)					63	22
(16)					64	23
(17)					65	24
(18)					66	26
(19)					67	27
(20)					68	28
(21)					69	29
(22)					6A	30
(23)					6B	31
(24)					6C	32
(25)					6D	33
(26)					6E	34
(27)					6F	35
(28)					70	37
(29)					71	38
↓ (30)	↓	↓	↓		72	↓ 39
ELIDIO(31)	NU	I	04		73	P2B-40
MACWRT(0)	MACWRT (0)	O	01		AB	P1B-21
(1)	(1)				AC	22
(2)	(2)				AD	23
(3)	(3)				AE	24
(4)	(4)				AF	26
(5)	(5)				B0	27
↓ (6)	↓ (6)		↓		B1	28
MACWRT(7)	MACWRT (7)		01		B2	30
BDS21(48)	NU		03		C4	01
(49)					C5	02
(50)					C6	03
(51)					C7	04
(52)					C8	06
(53)					C9	07
(54)					CA	08
(55)					CB	09
(56)					CC	10
(57)					CD	11
(58)					CE	12
(59)					CF	13
(60)					D0	14
(61)					D1	15
↓ (62)	↓	↓	↓	↓	↓ D2	↓ 17
BDS21(63)	NU	O	03	Z	T D3	P1B-18

ZIF GROUND PINS			
P1B-05	P1B-25	P2B-05	P2B-25
P1B-16	P1B-36	P2B-16	P2B-36

NOTES:

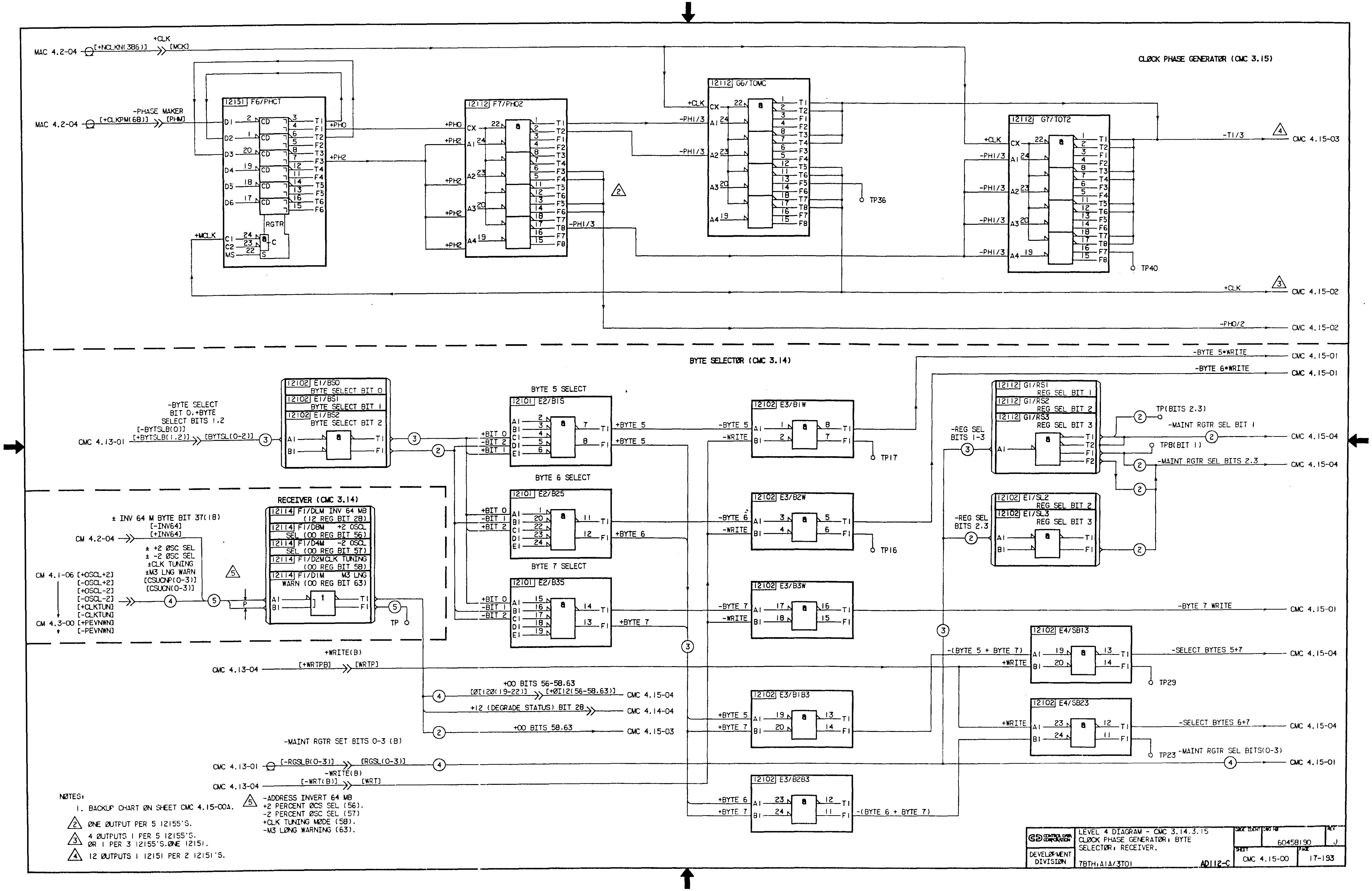
△1 CONNECTOR TYPES:

C = COAX
D = DIFFERENTIAL
Z = ZIF TO FOIL ON INTERCONNECT BOARD

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 CONNECTOR CHART
SUPPLEMENTAL WIRING INFORMATION
78TH:A1C/3T00 AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.14-CC
PAGE 17-192



NØTES:

1. BACKUP CHART ØN SHEET CMC 4.15-00A.

△2 ØNE ØUTPUT PER 5 12155'S.

△3 4 ØUTPUTS 1 PER 5 12155'S.
ØR 1 PER 3 12155'S.ØNE 12151.

△4 12 ØUTPUTS 1 12151 PER 2 12151'S.

△5 -ADDRESS INVERT 64 MB
+2 PERCENT ØCS SEL (56).
-2 PERCENT ØSC SEL (57)
+CLK TUNING MØDE (58).
-M3 LØNG WARNING (63).

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM - CMC 3.14.3.15
CLØCK PHASE GENERATØR; BYTE
SELECTØR; RECEIVER.

7BTH;A1A/3T01 AD112-C

CAGE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.15-00	17-193

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12102 LOC: E01 NAME: BS0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-08		T	A1	1	BYTE SEL	8	T1	E02-04	3
			B1	2	BIT 0	7	F1	TERM	

12102 LOC: E01 NAME: BS1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-09		T	A1	3	BYTE SEL	5	T1	E2-06	
			B1	4	BIT 1	6	F1	E2-20	

12102 LOC: E01 NAME: BS2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2B-10		T	A1	17	BYTE SEL	16	T1	E2-22	
			B1	18	BIT 2	15	F1	E2-17	

12114 LOC: F01 NAME: DLM

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-29		T	A1	2	N/U	7	T1	P1A-26	
P2A-31		T	B1	1		8	F1	TP-05	

12114 LOC: F01 NAME: D8M

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-39		T	A1	4	00 REG BIT 56	5	T1	P1A-23	2
P2A-40		T	B1	3		6	F1	TP-12	

12114 LOC: F01 NAME: D4M

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-37		T	A1	18	00 REG BIT 57	15	T1	P1A-21	2
P2A-38		T	B1	17		16	F1	TP-10	

12114 LOC: F01 NAME: D2M

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-33		T	A1	20	00 REG BIT 58	13	T1	F9-17	2
P2A-35		T	B1	19		14	F1	TP-13	

12114 LOC: F01 NAME: D1M

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-32		T	A1	24	00 REG BIT 63	11	T1	F9-18	2
P2A-34		T	B1	23		12	F1	TP-06	

12112 LOC: G01 NAME: RS1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1C-07	G5-18		A1	24	REG SEL BIT 1	1	T1	E5-20	
						2	T2	E10-20	
						3	F1	TP-08	
						4	F2	TERM	

12112 LOC: G01 NAME: RS2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1C-12	E1-19		A1	23	REG SEL BIT 2	8	T1	TP-01	
						7	T2	TERM	
						6	F1	D1-20	
						5	F2	D6-20	

12112 LOC: G01 NAME: RS3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1C-08	E1-23		A1	20	REG SEL BIT 3	11	T1	TP-07	
						12	T2	TERM	
						13	F1	D6-19	
						14	F2	D1-19	

12102 LOC: E01 NAME: SL2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G1-23	G5-16		A1	19	REG SEL	13	T1	TERM	
			B1	20	BIT 2	14	F1	E7-20	

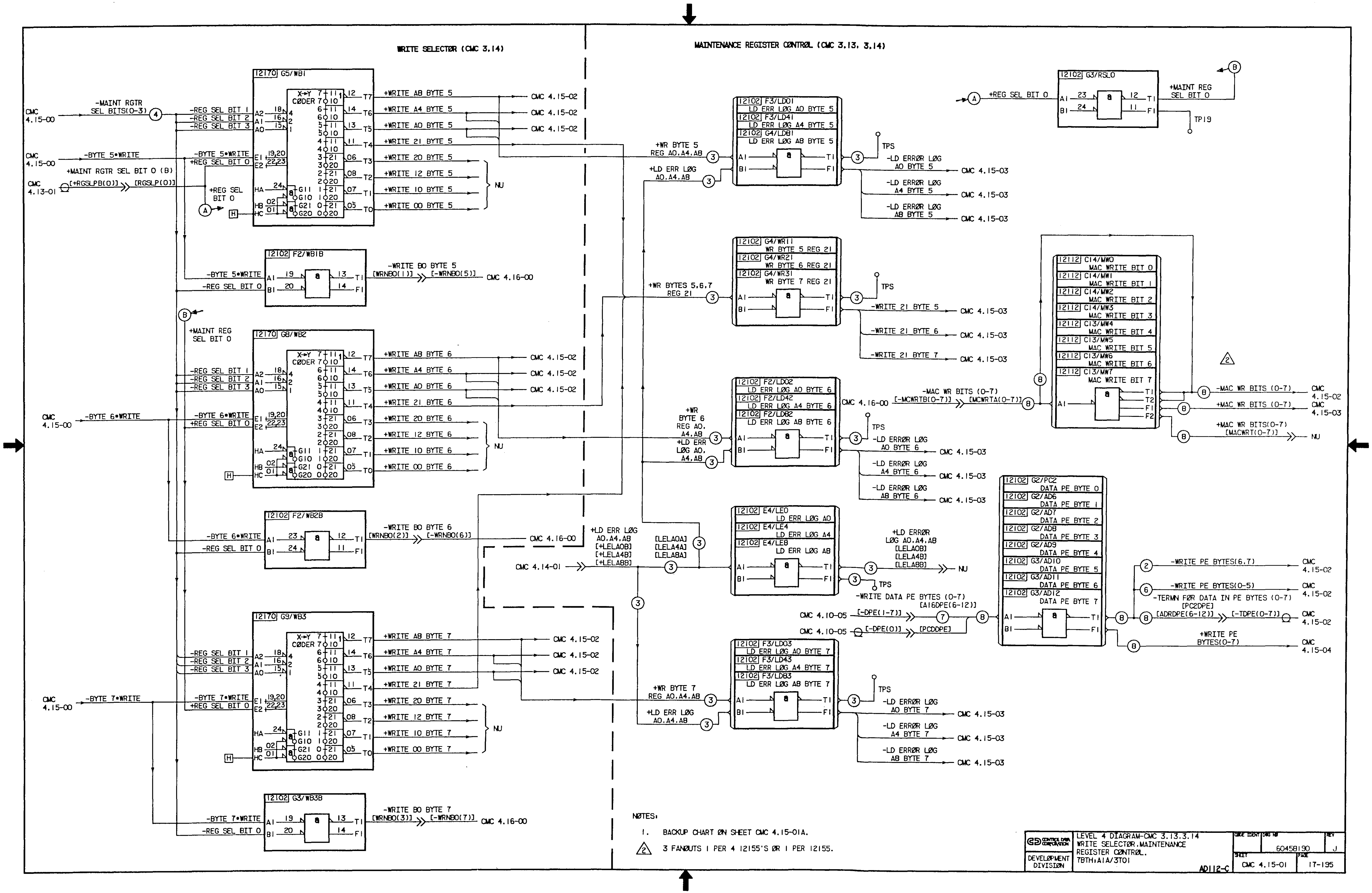
12102 LOC: E01 NAME: SL3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G1-20	G5-15		A1	23	REG SEL	12	T1	TERM	
			B1	24	BIT 3	11	F1	E7-19	

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.15-00
78TH; A1A/3T01 AD112-C

CODE IDENT 34010	D	DWG NO 60458190	REV J
		SHEET CMC 4.15-00A	17-194



NØTES:

1. BACKUP CHART ØN SHEET CMC 4.15-01A.

2. 3 FANØUTS 1 PER 4 12155'S ØR 1 PER 12155.

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN
LEVEL 4 DIAGRAM-CMC 3.13.3.14
WRITE SELECTØR.MAINTENANCE
REGISTER CØNTRØL.
7BTH:A1A/3T01
AD112-C
CAGE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.15-01
PAGE 17-195

12102 LOC: F03 NAME: LD01

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G05-13	G11-20		A1	1	LD ERR LOG	8	T1	TP-15	
F3-18	F02-02		B1	2	A0 BYTE 5	7	F1	B5-23	

12102 LOC: F03 NAME: LD41

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-14	B7-20		A1	3	LD ERR LOG	5	T1	TP-27	
F3-20	F2-4		B1	4	A4 BYTE 5	6	F1	C1-23	

12102 LOC: G04 NAME: LD81

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-12	G13-20		A1	1	LD ERR LOG	8	T1	TP-25	
E4-17	F3-24		B1	2	A8 BYTE 5	7	F1	C7-23	

12102 LOC: G04 NAME: WR11

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G5-11		T	A1	3	WR BYTE 5	5	T1	TP-24	
			B1	4	REG 21	6	F1	A3-23	

12102 LOC: G04 NAME: WR21

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G8-11		T	A1	17	WR BYTE 6	16	T1	TP-34	
			B1	18	REG 21	15	F1	A5-23	

12102 LOC: G04 NAME: WR31

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G9-11		T	A1	19	WR BYTE 7	13	T1	TP-26	
			B1	20	REG 21	14	F1	B11-23	

12102 LOC: F02 NAME: LD02

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G8-13	B8-20		A1	1	LD ERR LOG	8	T1	TP-09	
F3-2		T	B1	2	A0 BYTE	7	F1	B3-23	

12102 LOC: F02 NAME: LD42

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G8-14	B9-20		A1	3	LD ERR LOG	5	T1	TP-14	
F3-4		T	B1	4	A4 BYTE 6	6	F1	C3-23	

12102 LOC: F02 NAME: LD82

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G8-12	B10-20		A1	17	LD ERR LOG	16	T1	TP-11	
F3-24		T	B1	18	A8 BYTE 6	15	F1	C9-23	

12102 LOC: E04 NAME: LE0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-07	F3-18		A1	1	LD ERR	8	T1	P2A-09	
			B1	2	LOG A0	7	F1	TP-21	

12102 LOC: E04 NAME: LE4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-08	F3-20		A1	3	LD ERR	5	T1	P2A-11	
			B1	4	LOG A4	6	F1	TP-30	

12102 LOC: E04 NAME: LE8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-10	G4-2		A1	17	LD ERR	16	T1	P2A-12	
			B1	18	LOG A8	15	F1	TP-31	

12102 LOC: F03 NAME: LD03

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G8-13	E13-20		A1	17	LD ERR LOG	16	T1	TP-28	
E4-1	F3-2		B1	18	A0 BYTE 7	15	F1	B1-23	

12102 LOC: F03 NAME: LD43

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G8-14	G10-20		A1	19	LD ERR LOG	13	T1	TP-18	
E4-3	F3-4		B1	20	A4 BYTE 7	14	F1	C5-23	

12102 LOC: F03 NAME: LD83

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G9-12	F13-20		A1	23	LD ERR LOG	12	T1	TP-20	
G4-2	F2-18		B1	24	A8 BYTE 7	11	F1	C11-23	

12112 LOC: C14 NAME: MW0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-29	E13-2		A1	24	MAC WRITE BIT 0	1	T1	B10-2	
						2	T2	F13-2	
						3	F1	B11-2	
						4	F2	P1B-21	

12112 LOC: C14 NAME: MW1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-31	E13-4		A1	23	MAC WRITE BIT 1	8	T1	B07-4	
						7	T2	F13-4	
						6	F1	B11-1	
						5	F2	P1B-22	

12112 LOC: C14 NAME: MW2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-32	E13-16		A1	20	MAC WRITE BIT 2	11	T1	B07-16	
						12	T2	F13-16	
						13	F1	B11-20	
						14	F2	P1B-23	

12112 LOC: C14 NAME: MW3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-33	E13-18		A1	19	MAC WRITE BIT 3	18	T1	B10-18	
						17	T2	F13-18	
						16	F1	B11-19	
						15	F2	P1B-24	

12112 LOC: C13 NAME: MW4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-34	E14-2		A1	24	MAC WRITE BIT 4	1	T1	A10-2	
						2	T2	F14-2	
						3	F1	B11-18	
						4	F2	P1B-26	

12112 LOC: C13 NAME: MW5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-35	E14-4		A1	23	MAC WRITE BIT 5	8	T1	A07-4	
						7	T2	F14-4	
						6	F1	B11-17	
						5	F2	P1B-27	

12112 LOC: C13 NAME: MW6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-37	A7-16		A1	20	MAC WRITE BIT 6	11	T1	A10-16	
						12	T2	F14-16	
						13	F1	B12-2	
						14	F2	P1B-28	

12112 LOC: C13 NAME: MW7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-38	E14-18		A1	19	MAC WRITE BIT 7	18	T1	A10-18	
						17	T2	F14-18	
						16	F1	B12-1	
						15	F2	P1B-30	

12102 LOC: G02 NAME: PC2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1C-51		T	A1	1	DATA PE	8	T1	B7-15	
			B1	2	BYTE 0	7	F1	F9-2	

12102 LOC: G02 NAME: AD6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-35		T	A1	3	DATA PE	5	T1	B7-7	
			B1	4	BYTE 1	6	F1	F9-3	

12102 LOC: G02 NAME: AD7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-37		T	A1	17	DATA PE	16	T1	A07-1	
			B1	18	BYTE 2	15	F1	F9-4	

12102 LOC: G02 NAME: AD8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-36		T	A1	19	DATA PE	13	T1	A07-3	
			B1	20	BYTE 3	14	F1	F9-5	

12102 LOC: G02 NAME: AD9

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-39		T	A1	23	DATA PE	12	T1	A07-15	
			B1	24	BYTE 4	11	F1	F9-6	

12102 LOC: G03 NAME: AD10

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-40		T	A1	1	DATA PE	8	T1	A07-17	
			B1	2	BYTE 5	7	F1	F9-20	

12102 LOC: G03 NAME: AD11

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-1		T	A1	3	DATA PE	5	T1	B9-1	
			B1	4	BYTE 6	6	F1	F8-22	

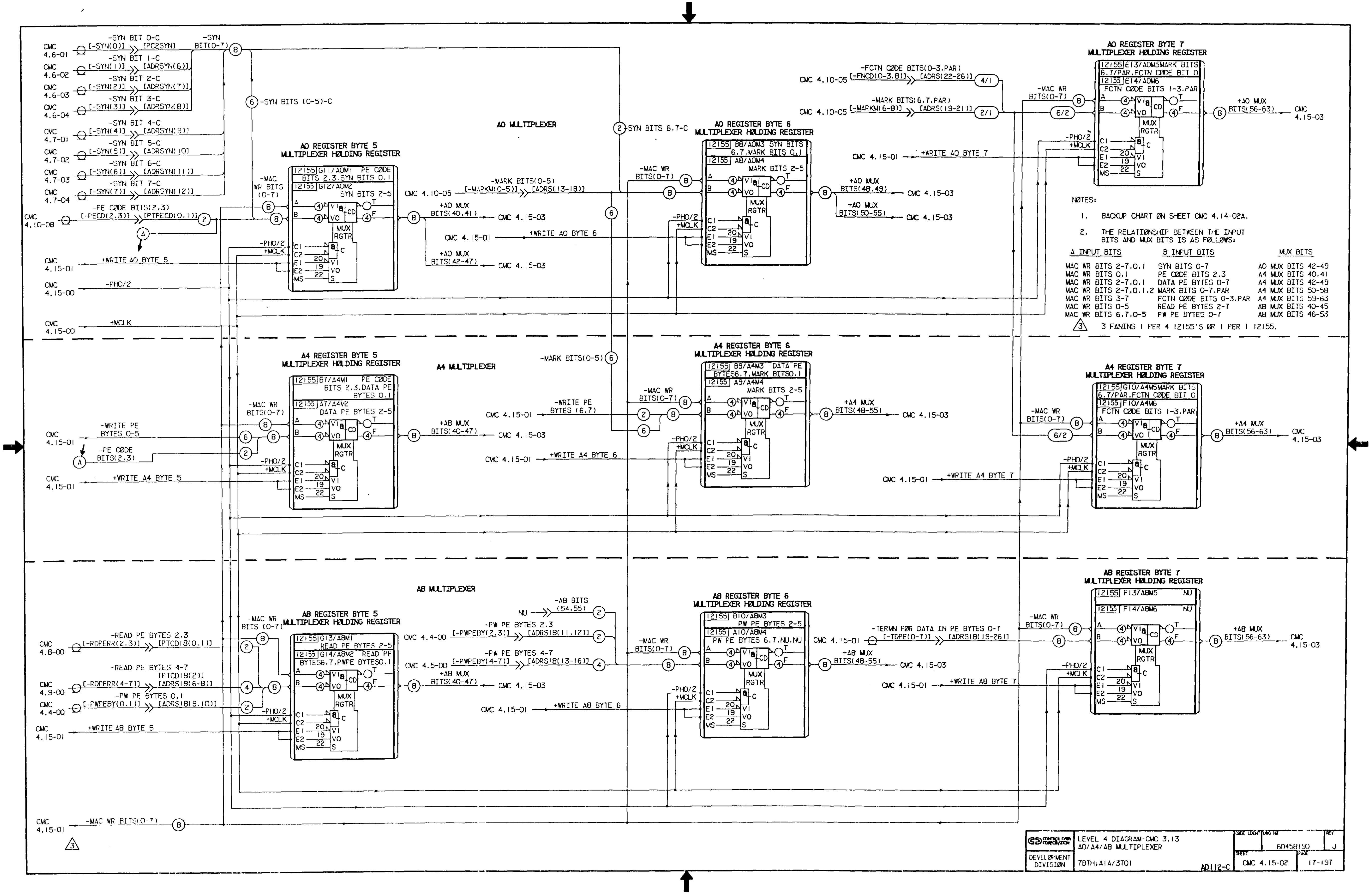
12102 LOC: G03 NAME: AD12

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-2		T	A1	17	DATA PE	16	T1	B09-3	
			B1	18	BYTE 7	15	F1	F8-23	

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.15 -01

78TH; A1A/3T01
AD112-C

PUB. NO 60458190
REV J
PAGE CMC 4.15-01A 17-196



NOTES:

1. BACKUP CHART ON SHEET CMC 4.14-02A.

2. THE RELATIONSHIP BETWEEN THE INPUT BITS AND MUX BITS IS AS FOLLOWS:

A INPUT BITS	B INPUT BITS	MUX BITS
MAC WR BITS 2-7.0.1	SYN BITS 0-7	A0 MUX BITS 42-49
MAC WR BITS 0.1	PE CODE BITS 2.3	A4 MUX BITS 40.41
MAC WR BITS 2-7.0.1	DATA PE BYTES 0-7	A4 MUX BITS 42-49
MAC WR BITS 2-7.0.1.2	MARK BITS 0-7.PAR	A4 MUX BITS 50-58
MAC WR BITS 3-7	FCTN CODE BITS 0-3.PAR	A4 MUX BITS 59-63
MAC WR BITS 0-5	READ PE BYTES 2-7	A8 MUX BITS 40-45
MAC WR BITS 6.7.0-5	PW PE BYTES 0-7	A8 MUX BITS 46-53

△3 3 FANINS 1 PER 4 12155'S OR 1 PER 1 12155.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION
LEVEL 4 DIAGRAM-CMC 3.13
A0/A4/A8 MULTIPLEXER
7BTH;A1A/3T01
AD112-C
CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.15-02
PAGE 17-197

12155 LOC: G11 NAME: AOM1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G13-2	G10-2		A1	2	AO MUX BIT 40	8	T1	TERM	
PIC-134			B1	1		7	F1	B5-2	
G13-4	G10-4		A2	4	AO MUX BIT 41	5	T2	TERM	
PIC-130			B2	3		6	F2	B5-1	
G13-16	G10-16		A3	16	AO MUX BIT 42	13	T3	TERM	
PIC-125		T	B3	15		14	F3	B6-2	
G13-18	G10-18		A4	18	AO MUX BIT 43	12	T4	TERM	
PIC-129		T	B4	17		11	F4	B6-1	
F10-24	G13-24		C1	24					
G10-23	G12-23		C2	23					
F3-1	G11-19		E1	20					
G11-20	G12-19		E2	19					
			MS	22					

12155 LOC: G12 NAME: AOM2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G14-2	F10-02		A1	2	AO MUX BIT 44	8	T1	TERM	
PIC-145		T	B1	1		7	F1	B6-20	
G14-4	F10-04		A2	4	AO MUX BIT 45	5	T2	TERM	
PIC-141		T	B2	3		6	F2	B6-19	
G14-16	F10-16		A3	16	AO MUX BIT 46	13	T3	TERM	
PIC-142		T	B3	15		14	F3	B6-18	
G14-18	F10-18		A4	18	AO MUX BIT 47	12	T4	TERM	
PIC-146		T	B4	17		11	F4	B6-17	
G10-24	F13-24		C1	24					
G11-23	G13-23		C2	23					
G12-19		T	E1	20					
G11-19	G12-20		E2	19					
			MS	22					

12155 LOC: B8 NAME: AOM3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B9-2	B7-2		A1	2	AO MUX BIT 48	8	T1	TERM	
PIC-97		T	B1	1		7	F1	B4-2	
B7-4	B9-4		A2	4	AO MUX BIT 49	5	T2	TERM	
PIC-92		T	B2	3		6	F2	B4-1	
B7-16	B9-16		A3	16	AO MUX BIT 50	13	T3	TERM	
B9-3		T	B3	15		14	F3	B3-2	
B9-18	B7-18		A4	18	AO MUX BIT 51	12	T4	TERM	
B9-15		T	B4	17		11	F4	B3-1	
B7-24	B9-24		C1	24					
B7-23	B9-23		C2	23					
F2-1	B8-19		E1	20					
B8-20	A8-20		E2	19					
			MS	22					

12155 LOC: A8 NAME: AOM4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A9-2	A7-2		A1	2	AO MUX BIT 52	8	T1	TERM	
B9-17		T	B1	1		7	F1	B3-20	
A7-4	A9-4		A2	4	AO MUX BIT 53	5	T2	TERM	
A9-3		T	B2	3		6	F2	B3-19	
A9-16	A7-16		A3	16	AO MUX BIT 54	13	T3	TERM	
A9-15		T	B3	15		14	F3	B3-18	
A9-18	A7-18		A4	18	AO MUX BIT 55	12	T4	TERM	
A9-17		T	B4	17		11	F4	B3-17	
A7-24	A9-24		C1	24					
A7-23	A9-23		C2	23					
B8-19	A8-19		E1	20					
A8-20		T	E2	19					
			MS	22					

12155 LOC: E13 NAME: AOM5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C14-24		T	A1	2	AO MUX BIT 56	8	T1	TERM	
P2B-18	G10-1		B1	1		7	F1	B1-2	
C14-23		T	A2	4	AO MUX BIT 57	5	T2	TERM	
P2B-19	G110-3		B2	3		6	F2	B1-1	
C14-20		T	A3	16	AO MUX BIT 58	13	T3	TERM	
P2B-20	G10-15		B3	15		14	F3	B1-20	
C14-18		T	A4	18	AO MUX BIT 59	12	T4	TERM	
P2B-01	G10-17		B4	17		11	F4	B1-19	
F13-24	E14-24		C1	24					
E14-23		T	C2	23					
F3-17	E13-18		E1	20					
E13-20	F14-18		E2	19					
			MS	22					

12155 LOC: E14 NAME: AOM6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-24		T	A1	2	AO MUX BIT 60	8	T1	TERM	
P2B-02	F10-1		B1	1		7	F1	B1-18	
C13-23		T	A2	4	AO MUX BIT 61	5	T2	TERM	
P2B-03	F10-3		B2	3		6	F2	B1-17	
C13-20		T	A3	16	AO MUX BIT 62	13	T3	TERM	
P2B-04	F10-15		B3	15		14	F3	B2-2	
C13-19		T	A4	18	AO MUX BIT 63	12	T4	TERM	
P2B-06	F10-17		B4	17		11	F4	B2-1	
E13-24		T	C1	24					
F14-23	E13-23		C2	23					
E14-19		T	E1	20					
E13-19	E14-20		E2	19					
			MS	22					

12155 LOC: B7 NAME: A4M1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B8-2		T	A1	2	A4 MUX BIT 40	8	T1	TERM	
G11-1		T	B1	1		7	F1	C01-2	
C14-8	B8-4		A2	4	A4 MUX BIT 41	5	T2	TERM	
G11-3		T	B2	3		6	F2	C01-1	
C14-11	B8-16		A3	16	A4 MUX BIT 42	13	T3	TERM	
G02-08	PIC-075		B3	15		14	F3	C01-20	
B8-18		T	A4	18	A4 MUX BIT 43	12	T4	TERM	
G02-05	PIC-102		B4	17		11	F4	C01-19	
F7-13	B8-24		C1	24					
G6-17	B8-23		C2	23					
F3-3	B7-19		E1	20					
B7-20	A7-20		E2	19					
			MS	22					

12155 LOC: A7 NAME: A4M2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A08-2		T	A1	2	A4 MUX BIT 44	8	T1	TERM	
G02-16	PIC-083		B1	1		7	F1	C01-18	
C13-8	A08-4		A2	4	A4 MUX BIT 45	5	T2	TERM	
G02-13	PIC-101		B2	3		6	F2	C01-17	
A08-16		T	A3	16	A4 MUX BIT 46	13	T3	TERM	
G02-12	PIC-076		B3	15		14	F3	C02-2	
A08-18		T	A4	18	A4 MUX BIT 47	12	T4	TERM	
G03-08	PIC-084		B4	17		11	F4	C02-1	
F7-14	A8-24		C1	24					
F6-24	A8-23		C2	23					
B7-19	A7-19		E1	20					
A7-20		T	E2	19					
			MS	22					

12155 LOC: B9 NAME: A4M3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B10-2	B08-2		A1	2	A4 MUX BIT 48	8	T1	TERM	
G3-5	PIC-105	T	B1	1		7	F1	C3-2	
B8-4	B10-4		A2	4	A4 MUX BIT 49	5	T2	TERM	
G3-16	PIC-110	T	B2	3		6	F2	C3-1	
B8-16	B10-16		A3	16	A4 MUX BIT 50	13	T3	TERM	
P2B-11	B8-15		B3	15		14	F3	C3-20	
B10-18	B8-18		A4	18	A4 MUX BIT 51	12	T4	TERM	
P2B-12	B8-17		B4	17		11	F4	C3-19	
B8-24	B10-24		C1	24					
B8-23	B10-23		C2	23					
F2-3	B9-19		E1	20					
B9-20	A9-20		E2	19					
			MS	22					

12155 LOC: A9 NAME: A4M4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A10-2	A08-2		A1	2	A4 MUX BIT 52	8	T1	TERM	
P2B-13	A08-1		B1	1		7	F1	C3-18	
A08-4	A10-4		A2	4	A4 MUX BIT 53	5	T2	TERM	
P2B-14	A08-3		B2	3		6	F2	C3-17	
A10-16	A08-16		A3	16	A4 MUX BIT 54	13	T3	TERM	
P2B-15	A08-15		B3	15		14	F3	C4-2	
A10-18	A08-18		A4	18	A4 MUX BIT 55	12	T4	TERM	
P2B-17	A08-17		B4	17		11	F4	C4-1	
A8-24	A10-24		C1	24					
A8-23	A10-23		C2	23					
B9-18	A9-19		E1	20					
A9-20		T	E2	19					
			MS	22					

12155 LOC: G10 NAME: A4M5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G11-2		T	A1	2	A4 MUX BIT 56	8	T1	TERM	
E13-1		T	B1	1		7	F1	C5-2	
G11-4		T	A2	4	A4 MUX BIT 57	5	T2	TERM	
E13-3		T	B2	3		6	F2	C5-1	
G11-16		T	A3	16	A4 MUX BIT 58	13	T3	TERM	
E13-15		T	B3	15		14	F3	C5-20	
G11-18		T	A4	18	A4 MUX BIT 59	12	T4	TERM	
E13-17		T	B4	17		11	F4	C5-18	
F7-6	G12-24		C1	24					
G6-17	G11-23		C2	23					
F3-19	G10-19		E1	20					
G10-20	F10-20		E2	19					
			MS	22					

12155 LOC: F10 NAME: A4M6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G12-2		T	A1	2	A4 MUX BIT 60	8	T1	TERM	
F14-1		T	B1	1		7	F1	C5-18	
G12-4		T	A2	4	A4 MUX BIT 61	5	T2	TERM	
E14-3		T	B2	3		6	F2	C5-17	
G12-16		T	A3	16	A4 MUX BIT 62	13	T3	TERM	
E14-15		T	B3	15		14	F3	C6-2	
G12-18		T	A4	18	A4 MUX BIT 63	12	T4	TERM	
E14-17		T	B4	17		11	F4	C6-1	
F7-5	G11-24		C1	24					
G6-18	F13-23		C2	23					
G10-19	F10-19		E1	20					
F10-20		T	E2	19					
			MS	22					

12155 LOC: G13 NAME: A8M1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F13-2	G11-2		A1	2	A8 MUX BIT 40	8	T1	TERM	
PIC-162		T	B1	1		7	F1	C7-2	
F13-4	G11-4		A2	4	A8 MUX BIT 41	5	T2	TERM	
PIC-158		T	B2	3		6	F2	C7-1	
F13-16	G11-16		A3	16	A8 MUX BIT 42	13	T3	TERM	
PIC-153		T	B3	15		14	F3	C7-20	
F13-18	G11-18		A4	18	A8 MUX BIT 43	12	T4	TERM	
PIC-157		T	B4	17		11	F4	C7-19	
G11-24	G14-24		C1	24					
G12-23	G14-23		C2	23					
G4-1	G13-19		E1	20					
G13-20	G14-19		E2	19					
			MS	22					

12155 LOC: G14 NAME: A8M2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F14-2	G12-2		A1	2	A8 MUX BIT 44	8	T1	TERM	
PIC-182		T	B1	1		7	F1	C7-18	
F14-4	G12-4		A2	4	A8 MUX BIT 45	5	T2	TERM	
PIC-178		T	B2	3		6	F2	C7-17	
F14-16	G12-16		A3	16	A8 MUX BIT 46	13	T3	TERM	
PIC-166		T	B3	15		14	F3	C8-2	
F14-18	G12-18		A4	18	A8 MUX BIT 47	12	T4	TERM	
PIC-177		T	B4	17		11	F4	C8-1	
G13-24	F14-24		C1	24					
G13-23		T	C2	23					
G14-19		T	E1	20					
G13-19	G14-20		E2	19					
			MS	22					

12155 LOC: B10 NAME: A8M3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C14-1	B08-2		A1	2	A8 MUX BIT 48	8	T1	TERM	
PIC-126		T	B1	1		7	F1	C9-2	
B09-4		T	A2	4	A8 MUX BIT 49	5	T2	TERM	
PIC-121		T	B2	3		6	F2	C9-1	
B09-16		T	A3	16	A8 MUX BIT 50	13	T3	TERM	
PIC-109		T	B3	15		14	F3	C9-20	
C14-18	B09-18		A4	18	A8 MUX BIT 51	12	T4	TERM	
PIC-114		T	B4	17		11	F4	C9-19	
B8-24		T	C1	24					
B10-23		T	C2	23					
F2-17	B10-19		E1	20					
B10-20	A10-19		E2	19					
			MS	22					

12155 LOC: A10 NAME: A8M4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-1	A09-2		A1	2	A8 MUX BIT 52	8	T1	TERM	
PIC-122		T	B1	1		7	F1	C9-18	
A09-4		T	A2	4	A8 MUX BIT 53	5	T2	TERM	
PIC-117		T	B2	3		6	F2	C9-17	
C13-11	A09-16		A3	16	A8 MUX BIT 54	13	T3	TERM	
PIC-113		T	B3	15		14	F3	C10-2	
C13-18	A09-18		A4	18	A8 MUX BIT 55	12	T4	TERM	
PIC-118		T	B4	17		11	F4	C10-1	
A9-24		T	C1	24					
A9-23		T	C2	23					
A10-19		T	E1	20					
B10-19	A10-20		E2	19					
			MS	22					

12155 LOC: F13 NAME: A8M5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C14-2	G13-2		A1	2	A8 MUX BIT 56	8	T1	TERM	
PIC-170		T	B1	1		7	F1	C11-2	
C14-7	G13-4		A2	4	A8 MUX BIT 57	5	T2	TERM	
PIC-168		T	B2	3		6	F2	C11-1	
C14-12	G13-16		A3	16	A8 MUX BIT 58	13	T3	TERM	
PIC-154		T	B3	15		14	F3	C11-20	
C14-17	G13-18		A4	18	A8 MUX BIT 59	12	T4	TERM	
PIC-174		T	B4	17		11	F4	C11-19	
G12-24	E13-24		C1	24					
F10-23	F14-23		C2	23					
F3-23	F13-19		E1	20					
F13-20	F14-19		E2	19					
			MS	22					

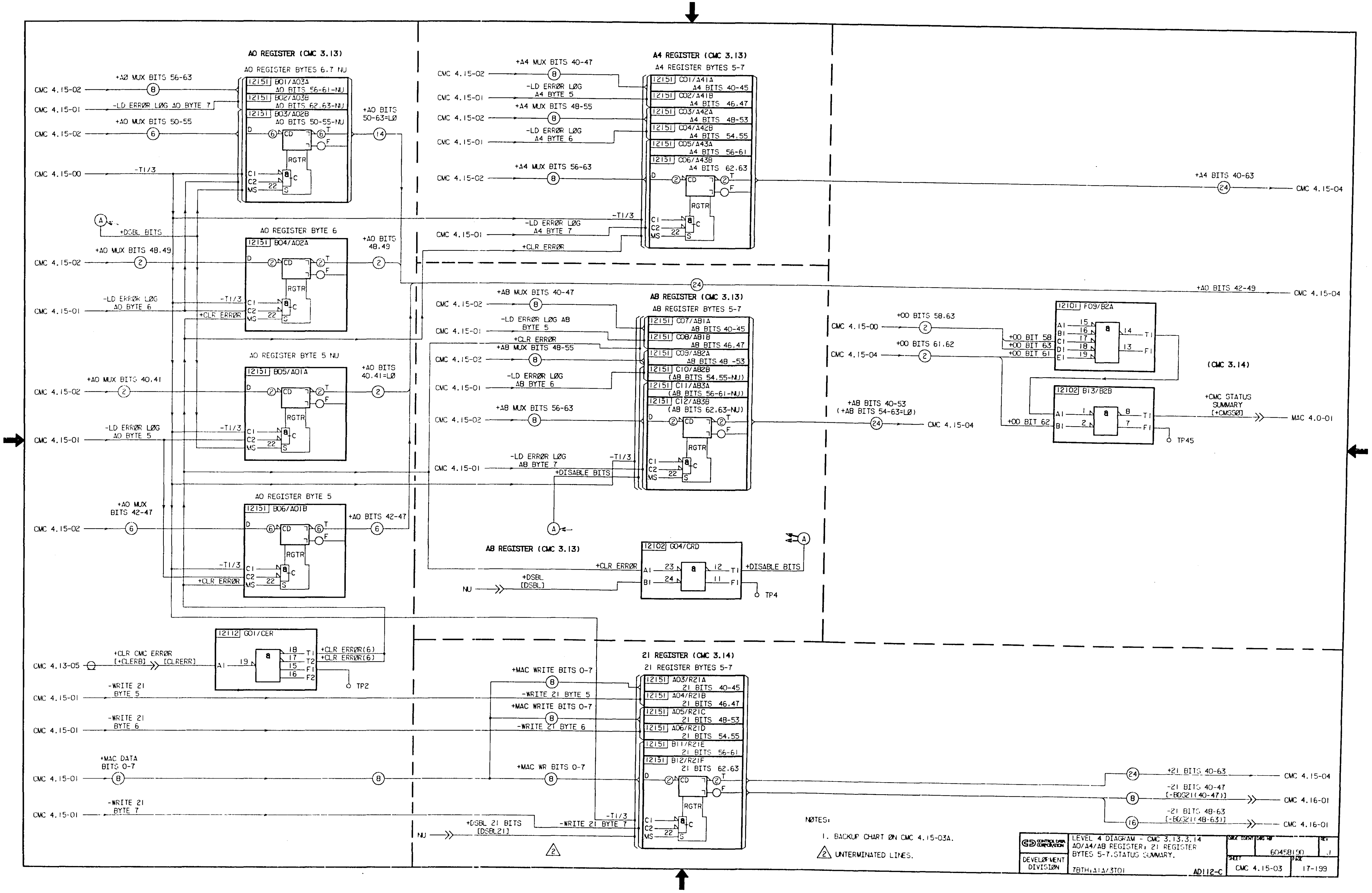
12155 LOC: F14 NAME: A8M6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-2	G14-2		A1	2	A8 MUX BIT 60	8	T1	TERM	
PIC-181		T	B1	1		7	F1	C11-18	
C13-7	G14-4		A2	4	A8 MUX BIT 61	5	T2	TERM	
PIC-173		T	B2	3		6	F2	C11-17	
C13-12	G14-16		A3	16	A8 MUX BIT 62	13	T3	TERM	
PIC-161		T	B3	15		14	F3	C12-2	
C13-17	G14-18		A4	18	A8 MUX BIT 63	12	T4	TERM	
PIC-165		T	B4	17		11	F4	C12-1	
G14-24		T	C1	24					
F13-23	E14-23		C2	23					
F14-19		T	E1	20					
F13-19	F14-20		E2	19					
			MS	22					

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.15-02
7BTH; A1A/3T01

AD112-C

PUB. NO 60458190
REV J



NØTES:

1. BACKUP CHART ØN CMC 4.15-03A.

2. UNTERMINATED LINES.

CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM - CMC 3.13.3.14
AO/A4/A8 REGISTER, 21 REGISTER
BYTES 5-7, STATUS SUMMARY.

7BTH, A1A/3T01

AD112-C

DWG NO 60458150

REV J

SHEET CMC 4.15-03

PAGE 17-199

12151 LOC: B01 NAME: A03A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E13-7		T	D1	2	AO	3	T1	D12-4	
					BIT 56-NU	4	F1	TERM	
E13-6		T	D2	1	AO	6	T2	D12-16	
					BIT 57-NU	5	F2	TERM	
E13-14		T	D3	20	AO	8	T3	D13-24	
					BIT 58-NU	7	F3	TERM	
E13-11		T	D4	19	AO	12	T4	D14-4	
					BIT 59-NU	11	F4	TERM	
E14-7		T	D5	18	AO	14	T5	D14-16	
					BIT 60-NU	13	F5	TERM	
E14-6		T	D6	17	AO	16	T6	E7-24	
					BIT 61-NU	15	F6	TERM	
B2-24		T	C1	24					
F3-15	B2-23		C2	23					
G4-12	B2-22		MS	22					

12151 LOC: B02 NAME: A03B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E14-14		T	D1	2	AO	3	T1	E8-4	
					BIT 62-NU	4	F1	TERM	
E14-11		T	D2	1	AO	6	T2	E8-16	
					BIT 63-NU	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
G6-1	B1-24		C1	24					
B1-23		T	C2	23					
B1-22	B3-22		MS	22					

12151 LOC: B03 NAME: A02B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B8-14		T	D1	2	AO	3	T1	D8-4	
					BIT 50-NU	4	F1	TERM	
B8-11		T	D2	1	AO	6	T2	D8-16	
					BIT 51-NU	5	F2	TERM	
A8-7		T	D3	20	AO	8	T3	D9-24	
					BIT 52-NU	7	F3	TERM	
A8-6		T	D4	19	AO	12	T4	D10-4	
					BIT 53-NU	11	F4	TERM	
A8-14		T	D5	18	AO	14	T5	D10-16	
					BIT 54-NU	13	F5	TERM	
A8-11		T	D6	17	AO	16	T6	D11-24	
					BIT 55-NU	15	F6	TERM	
B4-24		T	C1	24					
F2-7	B4-23		C2	23					
B2-22	B5-22		MS	22					

12151 LOC: B04 NAME: A02A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B8-7		T	D1	2	AO	3	T1	D6-16	
					BIT 48	4	F1	TERM	
B8-6		T	D2	1	AO	6	T2	D7-24	
					BIT 49	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
G07-11	B3-24		C1	24					
B3-23		T	C2	23					
C4-22	B6-22		MS	22					

12151 LOC: B05 NAME: A01A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G11-7		T	D1	2	AO	3	T1	D1-24	
					BIT 40	4	F1	TERM	
G11-6		T	D2	1	AO	6	T2	D2-4	
					BIT 41	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
B6-24		T	C1	24					
F3-7	B6-23		C2	23					
B3-22	C10-22		MS	22					

12151 LOC: B06 NAME: A01B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G11-14		T	D1	2	AO	3	T1	D2-16	
					BIT 42	4	F1	TERM	
G11-11		T	D2	1	AO	6	T2	D3-24	
					BIT 43	5	F2	TERM	
G12-7		T	D3	20	AO	8	T3	D4-4	
					BIT 44	7	F3	TERM	
G12-6		T	D4	19	AO	12	T4	D4-16	
					BIT 45	11	F4	TERM	
G12-14		T	D5	18	AO	14	T5	D5-24	
					BIT 46	13	F5	TERM	
G12-11		T	D6	17	AO	16	T6	D6-4	
					BIT 47	15	F6	TERM	
G7-8	B5-24		C1	24					
B5-23		T	C2	23					
B4-22		T	MS	22					

12151 LOC: C01 NAME: A41A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B7-7		T	D1	2	A4	3	T1	D1-1	
					BIT 40	4	F1	TERM	
B7-6		T	D2	1	A4	6	T2	D2-5	
					BIT 41	5	F2	TERM	
B7-14		T	D3	20	A4	8	T3	D2-17	
					BIT 42	7	F3	TERM	
B7-11		T	D4	19	A4	12	T4	D3-1	
					BIT 43	11	F4	TERM	
A7-7		T	D5	18	A4	14	T5	D4-5	
					BIT 44	13	F5	TERM	
A7-6		T	D6	17	A4	16	T6	D4-17	
					BIT 45	15	F6	TERM	
C2-24		T	C1	24					
F3-6	C2-23		C2	23					
G1-18	C2-22		MS	22					

12151 LOC: C02 NAME: A41B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A7-14		T	D1	2	A4	3	T1	D5-1	
					BIT 46	4	F1	TERM	
A7-11		T	D2	1	A4	6	T2	D6-5	
					BIT 47	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
G6-8	C1-24		C1	24					
C1-23		T	C2	23					
C1-22	C3-22		MS	22					

12151 LOC: C03 NAME: A42A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B9-7		T	D1	2	A4	3	T1	D6-17	
					BIT 48	4	F1	TERM	
B9-6		T	D2	1	A4	6	T2	D7-1	
					BIT 49	5	F2	TERM	
B9-14		T	D3	20	A4	8	T3	D8-5	
					BIT 50	7	F3	TERM	
B9-11		T	D4	19	A4	12	T4	D8-17	
					BIT 51	11	F4	TERM	
A9-7		T	D5	18	A4	14	T5	D9-1	
					BIT 52	13	F5	TERM	
A9-6		T	D6	17	A4	16	T6	D10-5	
					BIT 53	15	F6	TERM	
C4-24		T	C1	24					
F2-6	C4-23		C2	23					
C2-22	C4-22		MS	22					

12151 LOC: C04 NAME: A42B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A9-14		T	D1	2	A4	3	T1	D10-17	
					BIT 54	4	F1	TERM	
A9-11		T	D2	1	A4	6	T2	D11-1	
					BIT 55	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
G6-7	C3-24		C1	24					
C3-23		T	C2	23					
C3-22	B4-22		MS	22					

12151 LOC: C05 NAME: A43A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G10-7		T	D1	2	A4	3	T1	D12-5	
					BIT 56	4	F1	TERM	
G10-6		T	D2	1	A4	6	T2	D12-17	
					BIT 57	5	F2	TERM	
G10-14		T	D3	20	A4	8	T3	D13-1	
					BIT 58	7	F3	TERM	
G10-11		T	D4	19	A4	12	T4	D14-5	
					BIT 59	11	F4	TERM	
F10-7		T	D5	18	A4	14	T5	D14-17	
					BIT 60	13	F5	TERM	
F10-6		T	D6	17	A4	16	T6	E7-1	
					BIT 61	15	F6	TERM	
C6-24		T	C1	24					
F3-14	C6-23		C2	23					
G4-23	C6-22		MS	22					

12151 LOC: C06 NAME: A43B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F10-14		T	D1	2	A4	3	T1	F8-5	
					BIT 62	4	F1	TERM	
F10-11		T	D2	1	A4	6	T2	E8-17	
					BIT 63	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
G7-7	C5-24		C1	24					
C5-23		T	C2	23					
C5-22	C7-22		MS	22					

12151 LOC: C07 NAME: A81A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G13-7		T	D1	2	A8	3	T1	D1-2	
					BIT 40	4	F1	TERM	
G13-6		T	D2	1	A8	6	T2	D2-6	
					BIT 41	5	F2	TERM	
G13-14		T	D3	20	A8	8	T3	D2-18	
					BIT 42	7	F3	TERM	
G13-11		T	D4	19	A8	12	T4	D3-2	
					BIT 43	11	F4	TERM	
G14-7		T	D5	18	A8	14	T5	D4-6	
					BIT 44	13	F5	TERM	
G14-6		T	D6	17	A8	16	T6	D4-18	
					BIT 45	15	F6	TERM	
G7-17	C8-24		C1	24					
G4-17	C8-23		C2	23					
C6-22	C8-22		MS	22					

12151 LOC: C08 NAME: A81B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G14-14		T	D1	2	A8	3	T1	D5-2	
					BIT 46	4	F1	TERM	
G14-11		T	D2	1	A8	6	T2	D6-6	
					BIT 47	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
C7-24		T	C1	24					
C7-23		T	C2	23					
C7-22	C9-22		MS	22					

12151 LOC: C09 NAME: A82A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B10-7		T	D1	2	A8	3	T1	D6-18	
					BIT 48	4	F1	TERM	
B10-6		T	D2	1	A8	6	T2	D7-2	
					BIT 49	5	F2	TERM	
B10-14		T	D3	20	A8	8	T3	D8-6	
					BIT 50	7	F3	TERM	
B10-11		T	D4	19	A8	12	T4	D8-18	
					BIT 51	11	F4	TERM	
A10-7		T	D5	18	A8	14	T5	D9-2	
					BIT 52	13	F5	TERM	
A10-6		T	D6	17	A8	16	T6	D10-6	
					BIT 53	15	F6	TERM	
G7-1	C10-24		C1	24					
F2-15	C10-23		C2	23					
C8-22		T	MS	22					

12151 LOC: C10 NAME: A82B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A10-14		T	D1	2	A8	3	T1	D10-18	
					BIT 54-NU	4	F1	TERM	
A10-11		T	D2	1	A8	6	T2	D11-2	
					BIT 55-NU	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
C9-24		T	C1	24					
C9-23		T	C2	23					
B5-22	C11-22		MS	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.15-03
7BTH; A1A/3T01 AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.15-03A 17-200

12151 LOC: C11 NAME: A83A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F13-7		T	D1	2	A8	3	T1	D12-6	
					BIT 56—NU	4	F1	TERM	
F13-6		T	D2	1	A8	6	T2	D12-18	
					BIT 57—NU	5	F2	TERM	
F13-14		T	D3	20	A8	8	T3	D13-2	
					BIT 58—NU	7	F3	TERM	
F13-11		T	D4	19	A8	12	T4	D14-6	
					BIT 59—NU	11	F4	TERM	
F14-7		T	D5	18	A8	14	T5	D14-18	
					BIT 60—NU	13	F5	TERM	
F14-6		T	D6	17	A8	16	T6	E7-2	
					BIT 61—NU	15	F6	TERM	
G7-2	C12-24		C1	24					
F3-11	C12-23		C2	23					
C10-22	C12-22		MS	22					

12151 LOC: C12 NAME: A83B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F14-14		T	D1	2	A8	3	T1	E8-6	
					BIT 62—NU	4	F1	TERM	
F14-11		T	D2	1	A8	6	T2	E8-18	
					BIT 63—NU	5	F2	TERM	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
C11-24		T	C1	24					
C11-23		T	C2	23					
C11-22		T	MS	22					

12151 LOC: A03 NAME: R21A

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A5-2		T	D1	2	21	3	T1	D1-23	
					BIT 40	4	F1	P1A-33	
A5-1		T	D2	1	21	6	T2	D2-3	
					BIT 41	5	F2	P1A-34	
A5-20		T	D3	20	21	8	T3	D2-15	
					BIT 42	7	F3	P1A-31	
A5-19		T	D4	19	21	12	T4	D3-23	
					BIT 43	11	F4	P1A-32	
A5-18		T	D5	18	21	14	T5	D4-3	
					BIT 44	13	F5	P1A-29	
A5-17		T	D6	17	21	16	T6	D4-15	
					BIT 45	15	F6	P1A-30	
A4-24		T	C1	24					
G4-6	A4-23		C2	23					
P2A-27	A4-22		MS	22					

12151 LOC: A04 NAME: R21B

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A6-2		T	D1	2	21	3	T1	D5-23	
					BIT 46	4	F1	P1A-27	
A6-1		T	D2	1	21	6	T2	D6-3	
					BIT 47	5	F2	P1A-28	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
G06-02	A3-24		C1	24					
A3-23		T	C2	23					
A3-22	A5-22		MS	22					

12151 LOC: A05 NAME: R21C

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B11-2	A03-2		D1	2	21	3	T1	D6-15	
					BIT 48	4	F1	P1B-01	
B11-1	A03-1		D2	1	21	6	T2	D7-23	
					BIT 49	5	F2	P1B-02	
B11-20	A03-20		D3	20	21	8	T3	D8-3	
					BIT 50	7	F3	P1B-03	
B11-19	A03-19		D4	19	21	12	T4	D8-15	
					BIT 51	11	F4	P1B-04	
B11-18	A03-18		D5	18	21	14	T5	D9-23	
					BIT 52	13	F5	P1B-06	
B11-17	A03-17		D6	17	21	16	T6	D10-3	
					BIT 53	15	F6	P1B-07	
A6-24		T	C1	24					
G4-15	A6-23		C2	23					
A4-22	A6-22		MS	22					

12151 LOC: A06 NAME: R21D

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B12-2	A4-2		D1	2	21	3	T1	D10-15	
					BIT 54	4	F1	P1B-08	
B12-1	A4-1		D2	1	21	6	T2	D11-23	
					BIT 55	5	F2	P1B-09	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
G7-12	A5-24		C1	24					
A5-23		T	C2	23					
A5-22	B11-22		MS	22					

12151 LOC: B11 NAME: R21E

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C14-3	A5-2		D1	2	21	3	T1	D12-3	
					BIT 56	4	F1	P1B-10	
C14-6	A5-1		D2	1	21	6	T2	D12-15	
					BIT 57	5	F2	P1B-11	
C14-13	A5-20		D3	20	21	8	T3	D13-23	
					BIT 58	7	F3	P1B-12	
C14-16	A5-19		D4	19	21	12	T4	D14-3	
					BIT 59	11	F4	P1B-13	
C13-3	A5-18		D5	18	21	14	T5	D14-15	
					BIT 60	13	F5	P1B-14	
C13-6	A5-17		D6	17	21	16	T6	E7-23	
					BIT 61	15	F6	P1B-15	
G7-18	B12-24		C1	24					
G4-14	B12-23		C2	23					
A6-22	B12-22		MS	22					

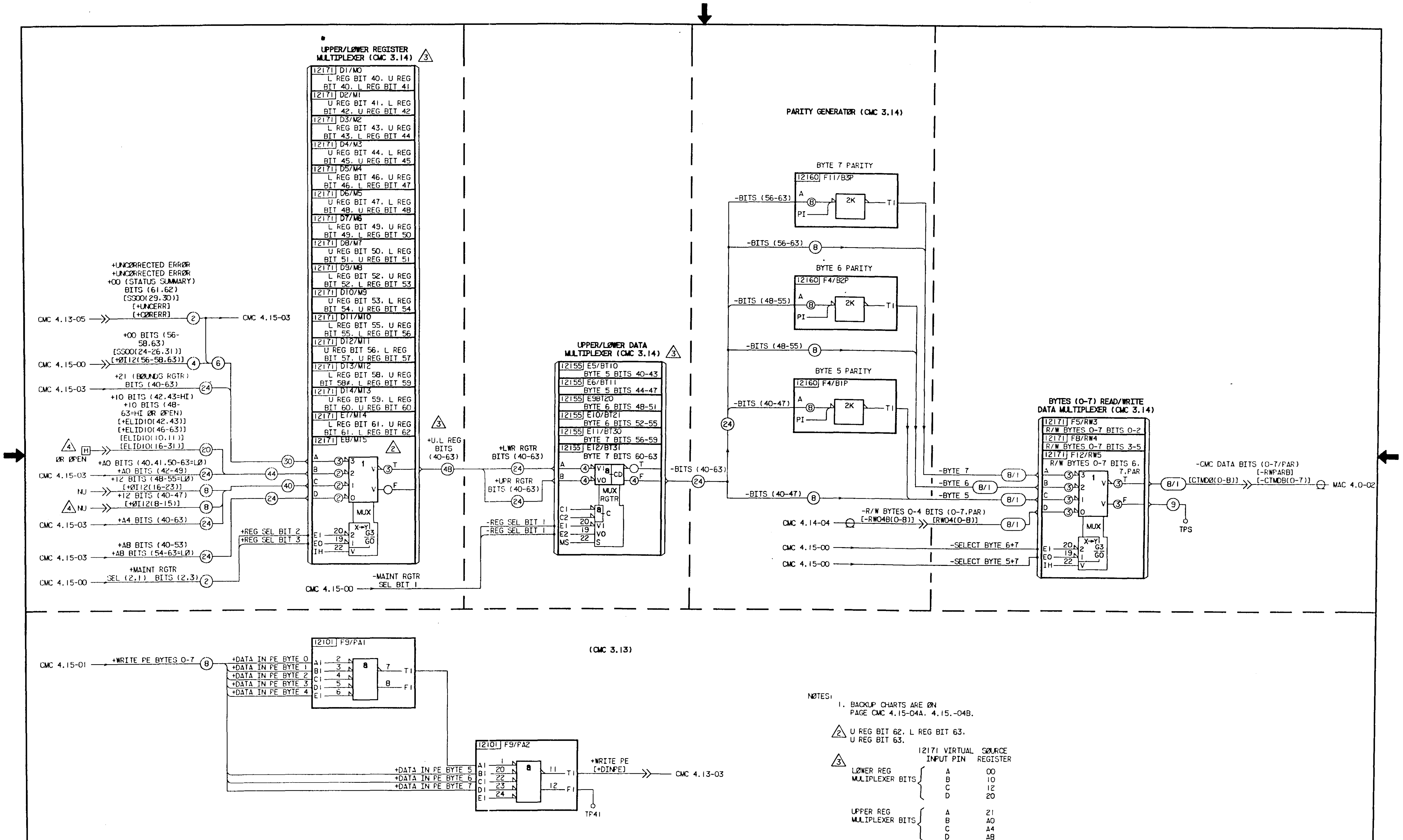
12151 LOC: B12 NAME: R21F

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-13	A6-2		D1	2	21	3	T1	E8-3	
					BIT 62	4	F1	P1B-17	
C13-16	A6-1		D2	1	21	6	T2	E8-15	
					BIT 63	5	F2	P1B-18	
			D3	20		8	T3		
						7	F3		
			D4	19		12	T4		
						11	F4		
			D5	18		14	T5		
						13	F5		
			D6	17		16	T6		
						15	F6		
B11-24		T	C1	24					
B11-23		T	C2	23					
B11-22		T	MS	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.15-03
78TH; A1A/3T01 AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.15-03B 17-201


UPPER/LØWER REGISTER MULTIPLEXER (CMC 3.14) 3
12171 D1/M0 L REG BIT 40, U REG BIT 40, L REG BIT 41
12171 D2/M1 U REG BIT 41, L REG BIT 42, U REG BIT 42
12171 D3/M2 L REG BIT 43, U REG BIT 43, L REG BIT 44
12171 D4/M3 U REG BIT 44, L REG BIT 45, U REG BIT 45
12171 D5/M4 L REG BIT 46, U REG BIT 46, L REG BIT 47
12171 D6/M5 U REG BIT 47, L REG BIT 48, U REG BIT 48
12171 D7/M6 L REG BIT 49, U REG BIT 49, L REG BIT 50
12171 D8/M7 U REG BIT 50, L REG BIT 51, U REG BIT 51
12171 D9/M8 L REG BIT 52, U REG BIT 52, L REG BIT 53
12171 D10/M9 U REG BIT 53, L REG BIT 54, U REG BIT 54
12171 D11/M10 L REG BIT 55, U REG BIT 55, L REG BIT 56
12171 D12/M11 U REG BIT 56, L REG BIT 57, U REG BIT 57
12171 D13/M12 L REG BIT 58, U REG BIT 58# L REG BIT 59
12171 D14/M13 U REG BIT 59, L REG BIT 60, U REG BIT 60
12171 E7/M14 L REG BIT 61, U REG BIT 61, L REG BIT 62
12171 E8/M15 2
MUX X+Y G3 G0
+UNCØRRECTED ERRØR +UNCØRRECTED ERRØR +00 (STATUS SUMMARY) BITS (61,62) [SS00(29,30)] [+UNCERR] [+CØRERR]
CMC 4.13-05
CMC 4.15-03
+00 BITS (56-58,63) [SS00(24-26,31)] [+ØI12(56-58,63)]
CMC 4.15-00
+21 (BØUNDS RGTR) BITS (40-63)
CMC 4.15-03
+10 BITS (42,43=HI) +10 BITS (48-63=HI ØR ØPEN) [+ELID10(42,43)] [+ELID10(46-63)] [ELID10(10,11)] [ELID10(16-31)]
4 H ØR ØPEN
+A0 BITS (40,41,50-63=LØ) +A0 BITS (42-49)
CMC 4.15-03
+12 BITS (48-55=LØ) [+ØI12(16-23)]
NU
+12 BITS (40-47) [+ØI12(8-15)]
4 NU
+A4 BITS (40-63)
CMC 4.15-03
+A8 BITS (40-53) +A8 BITS (54-63=LØ)
CMC 4.15-03
+MAINT RGTR SEL (2,1) BITS (2,3)
CMC 4.15-00
+REG SEL BIT 2 +REG SEL BIT 3
-MAINT RGTR SEL BIT 1
CMC 4.15-00
+U,L REG BITS (40-63)
+LWR RGTR BITS (40-63)
+UPR RGTR BITS (40-63)
-REG SEL BIT 1 -REG SEL BIT 1
UPPER/LØWER DATA MULTIPLEXER (CMC 3.14) 3
12155 E5/BT10 BYTE 5 BITS 40-43
12155 E6/BT11 BYTE 5 BITS 44-47
12155 E9BT20 BYTE 6 BITS 48-51
12155 E10/BT21 BYTE 6 BITS 52-55
12155 E11/BT30 BYTE 7 BITS 56-59
12155 E12/BT31 BYTE 7 BITS 60-63
MUX RGTR
-BITS (40-63)
PARITY GENERATØR (CMC 3.14)
BYTE 7 PARITY 12160 F11/B3P 2K
-BITS (56-63)
BYTE 6 PARITY 12160 F4/B2P 2K
-BITS (48-55)
BYTE 5 PARITY 12160 F4/B1P 2K
-BITS (40-47)
-BYTE 7 -BYTE 6 -BYTE 5
-R/W BYTES 0-4 BITS (0-7,PAR) [-RW04B(0-8)] [RW04(0-8)]
CMC 4.14-04
CMC 4.15-00 -SELECT BYTE 6+7
CMC 4.15-00 -SELECT BYTE 5+7
BYTES (0-7) READ/WRITE DATA MULTIPLEXER (CMC 3.14)
12171 F5/RW3 R/W BYTES 0-7 BITS 0-2
12171 F8/RW4 R/W BYTES 0-7 BITS 3-5
12171 F12/RW5 R/W BYTES 0-7 BITS 6, 7,PAR
-CMC DATA BITS (0-7/PAR) [CTMD0(0-8)] [-RWPARB] [-CTMDB(0-7)]
MAC 4.0-02
TPS
(CMC 3.13)
CMC 4.15-01 +WRITE PE BYTES 0-7
12101 F9/PA1
+DATA IN PE BYTE 0 +DATA IN PE BYTE 1 +DATA IN PE BYTE 2 +DATA IN PE BYTE 3 +DATA IN PE BYTE 4
12101 F9/PA2
+DATA IN PE BYTE 5 +DATA IN PE BYTE 6 +DATA IN PE BYTE 7
+WRITE PE [+DINPE]
CMC 4.13-03
TP41

NØTES:

1. BACKUP CHARTS ARE ØN PAGE CMC 4.15-04A, 4.15.-04B.

△2 U REG BIT 62, L REG BIT 63. U REG BIT 63.

△3

	12171 VIRTUAL INPUT PIN	SØURCE REGISTER
LØWER REG MULIPLEXER BITS	A	00
	B	10
	C	12
	D	20
UPPER REG MULIPLEXER BITS	A	21
	B	A0
	C	A4
	D	A8

△4 UNTERMINATED LINES.

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CMC 3.13.3.14
UPPER/LØWER REGISTER MULTIPLEXER,
UPPER/LØWER DATA MULTIPLEXER, PARITY
GENERATØR, WRITE PE.
(BTH,A1A/3T01
AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.15-04
PAGE 17-202

12171 LOC: D1 NAME: M0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L REG BIT 40	7	T1	E5-2	
			B1	4		8	F1	TERM	
P2A-28			C1	5					
			D1	6					
A3-3		T	A2	23	U REG BIT 40	11	T2	E5-1	
B5-3		T	B2	24		12	F2	TERM	
C1-3		T	C2	1					
C7-3		T	D2	2					
			A3	15	L REG BIT 41	14	T3	E5-4	
			B3	16		13	F3	TERM	
P2A-26			C3	17					
			D3	18					
G1-6	D2-20		E1	20					
G1-14	D2-19		E0	19					
			IH	22					

12171 LOC: D02 NAME: M1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A3-6		T	A1	3	U REG BIT 41	7	T1	E5-3	
B5-6		T	B1	4		8	F1	TERM	
C1-6		T	C1	5					
C7-6		T	D1	6					
			A2	23	L REG BIT 42	11	T2	E5-16	
P2B-21			B2	24		12	F2	TERM	
P2A-23			C2	1					
			D2	2					
A3-8		T	A3	15	U REG BIT 42	14	T3	E5-15	
B6-3		T	B3	16		13	F3	TERM	
C1-8		T	C3	17					
C7-8		T	D3	18					
D1-20	D3-20		E1	20					
D1-19	D3-19		E0	19					
			IH	22					

12171 LOC: D03 NAME: M2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L REG BIT 43	7	T1	E5-18	
P2B-22			B1	4		8	F1	TERM	
P2A-24			C1	5					
			D1	6					
A3-12		T	A2	23	U REG BIT 43	11	T2	E5-17	
B6-6		T	B2	24		12	F2	TERM	
C1-12		T	C2	1					
C7-12		T	D2	2					
			A3	15	L REG BIT 44	14	T3	E6-2	
			B3	16		13	F3	TERM	
P2A-21			C3	17					
			D3	18					
D2-20	D4-20		E1	20					
D2-19	D4-19		E0	19					
			IH	22					

12171 LOC: D04 NAME: M3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A3-14		T	A1	3	U REG BIT 44	7	T1	E6-1	
B6-8		T	B1	4		8	F1	TERM	
C1-14		T	C1	5					
C7-14		T	D1	6					
			A2	23	L REG BIT 45	11	T2	E6-4	
			B2	24		12	F2	TERM	
P2A-22			C2	1					
			D2	2					
A3-16		T	A3	15	U REG BIT 45	14	T3	E6-3	
B6-12		T	B3	16		13	F3	TERM	
C1-16		T	C3	17					
C7-16		T	D3	18					
D3-20	D5-20		E1	20					
D3-19	D5-19		E0	19					
			IH	22					

12171 LOC: D05 NAME: M4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L REG BIT 46	7	T1	E6-16	
P1C-39			B1	4		8	F1	TERM	
P2A-19			C1	5					
			D1	6					
A4-3		T	A2	23	U REG BIT 46	11	T2	E6-15	
B6-14		T	B2	24		12	F2	TERM	
C2-3		T	C2	1					
C8-3		T	D2	2					
			A3	15	L REG BIT 47	14	T3	E6-18	
P1C-40			B3	16		13	F3	TERM	
P2A-20			C3	17					
			D3	18					
D4-20		T	E1	20					
D4-19		T	E0	19					
			IH	22					

12171 LOC: D06 NAME: M5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A4-6		T	A1	3	U REG BIT 47	7	T1	E6-17	
B6-16		T	B1	4		8	F1	TERM	
C2-6		T	C1	5					
C8-6		T	D1	6					
			A2	23	L REG BIT 48	11	T2	E9-2	
P2B-23			B2	24		12	F2	TERM	
P1A-20		T	C2	1					
			D2	2					
A5-3		T	A3	15	U REG BIT 48	14	T3	E9-1	
B4-3		T	B3	16		13	F3	TERM	
C3-3		T	C3	17					
C9-3		T	D3	18					
G1-5	D7-20		E1	20					
G1-13	D7-19		E0	19					
			IH	22					

12171 LOC: D07 NAME: M6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L REG BIT 49	7	T1	E9-4	
P2B-24			B1	4		8	F1	TERM	
P1A-18			C1	5					
			D1	6					
A5-6		T	A2	23	U REG BIT 49	11	T2	E9-3	
B4-6		T	B2	24		12	F2	TERM	
C3-6		T	C2	1					
C9-6		T	D2	2					
			A3	15	L REG BIT 50	14	T3	E9-16	
P2B-26			B3	16		13	F3	TERM	
P1A-14			C3	17					
			D3	18					
D6-20	D8-20		E1	20					
D6-19	D8-19		E0	19					
			IH	22					

12171 LOC: D08 NAME: M7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A5-8		T	A1	3	U REG BIT 50	7	T1	E9-15	
B3-3		T	B1	4		8	F1	TERM	
C3-8		T	C1	5					
C9-8		T	D1	6					
			A2	23	L REG BIT 51	11	T2	E9-18	
P2B-27			B2	24		12	F2	TERM	
P1A-19		T	C2	1					
			D2	2					
A5-12		T	A3	15	U REG BIT 51	14	T3	E9-17	
B3-6		T	B3	16		13	F3	TERM	
C3-12		T	C3	17					
C9-12		T	D3	18					
D7-20	D9-20		E1	20					
D7-19	D9-10		E0	19					
			IH	22					

12171 LOC: D09 NAME: M8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L REG BIT 52	7	T1	E10-2	
P2B-28			B1	4		8	F1	TERM	
P1A-17		T	C1	5					
			D1	6					
A5-14		T	A2	23	U REG BIT 52	11	T2	E10-1	
B3-8		T	B2	24		12	F2	TERM	
C3-14		T	C2	1					
C9-14		T	D2	2					
			A3	15	L REG BIT 53	14	T3	E10-4	
P2B-29			B3	16		13	F3	TERM	
P1A-15		T	C3	17					
			D3	18					
D8-20	D10-20		E1	20					
D8-19	D10-19		E0	19					
			IH	22					

12171 LOC: D10 NAME: M9

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A5-16		T	A1	3	U REG BIT 53	7	T1	E10-3	
B3-12		T	B1	4		8	F1	TERM	
C3-16		T	C1	5					
C9-16		T	D1	6					
			A2	23	L REG BIT 54	11	T2	E10-16	
P2B-30			B2	24		12	F2	TERM	
P1A-13		T	C2	1					
			D2	2					
A6-3		T	A3	15	U REG BIT 54	14	T3	E10-15	
B3-14		T	B3	16		13	F3	TERM	
C4-3		T	C3	17					
C10-3		T	D3	18					
D9-20		T	E1	20					
D9-19		T	E0	19					
			IH	22					

12171 LOC: D11 NAME: M10

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1	3	L REG BIT 55	7	T1	E10-18	
P2B-31			B1	4		8	F1	TERM	
P1A-11			C1	5					
			D1	6					
A6-6		T	A2	23	U REG BIT 55	11	T2	E10-17	
B3-16		T	B2	24		12	F2	TERM	
C4-6		T	C2	1					
C10-6		T	D2	2					
P1A-09		T	A3	15	L REG BIT 56	14	T3	E11-2	
P2B-32			B3	16		13	F3	TERM	
			C3	17					
			D3	18					
E8-20	D12-20		E1	20					
E8-19	D12-19		E0	19					
			IH	22					

12171 LOC: D12 NAME: M11

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B11-3		T	A1	3	U REG BIT 56	7	T1	E11-1	
B1-3		T	B1	4		8	F1	TERM	
C5-3		T	C1	5					
C11-3		T	D1	6					
P1A-07		T	A2	23	L REG BIT 57	11	T2	E11-4	
P2B-33			B2	24		12	F2	TERM	
			C2	1					
			D2	2					
BJ1-6		T	A3	15	U REG BIT 57	14	T3	E11-3	
B1-6		T	B3	16		13	F3	TERM	
C5-6		T	C3	17					
C11-6		T	D3	18					
D11-20	D13-20		E1	20					
D11-19	D13-19		E0	19					
			IH	22					

12171 LOC: D13 NAME: M12

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-12		T	A1	3	L REG BIT 58	7	T1	E11-16	
P2B-34			B1	4		8	F1	TERM	
			C1	5					
			D1	6					
B11-8		T	A2	23	U REG BIT 58	11	T2	E11-15	
B1-8		T	B2	24		12	F2	TERM	
C5-8		T	C2	1					
C11-8		T	D2	2					
			A3	15	L REG BIT 59	14	T3	E11-18	
P2B-35			B3	16		13	F3	TERM	
			C3	17					
			D3	18					
D12-20	D14-20		E1	20					
D12-19	D14-19		E0	19					
			IH	22					

12171 LOC: D14 NAME: M13

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B11-12		T	A1	3	U REG BIT 59	7	T1	E11-17	
B1-12		T	B1	4		8	F1	TERM	
C5-12		T	C1	5					
C11-12		T	D1	6					
			A2	23	L REG BIT 60	11	T2	E12-2	
P2B-37			B2	24		12	F2	TERM	
			C2	1					
			D2	2					
B11-14		T	A3	15	U REG BIT 60	14	T3	E12-1	
B1-14		T	B3	16		13	F3	TERM	
C5-14		T	C3	17					
C11-14		T	D3	18					
D13-20		T	E1	20					
D13-19		T	E0	19					
			IH	22					

12171 LOC: E07 NAME: M14

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-13	F9-19		A1	3	L REG BIT 61	7	T1	E12-4	
P2B-38			B1	4		8	F1	TERM	
			C1	5					
			D1	6					
B11-16		T	A2	23	U REG BIT 61	11	T2	E12-3	
B1-16		T	B2	24		12	F2	TERM	
C5-16		T	C2	1					
C11-16		T	D2	2					
P2A-14	B13-2		A3	15	L REG BIT 62	14	T3	E12-16	
P2B-39			B3	16		13	F3	TERM	
			C3	17					
			D3	18					
E1-14	E8-20		E1	20					
E1-11	E8-19		E0	19					
			IH	22					

12171 LOC: E08 NAME: M15

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B12-3		T	A1	3	U REG BIT 62	7	T1	E12-15	
B2-3		T	B1	4		8	F1	TERM	
C6-3		T	C1	5					
C12-3		T	D1	6					
P1A-10		T	A2	23	L REG BIT 63	11	T2	E12-18	
P2B-40			B2	24		12	F2	TERM	
			C2	1					
			D2	2					
B12-6		T	A3	15	U REG BIT 63	14	T3	E12-17	
B2-6		T	B3	16		13	F3	TERM	
C6-6		T	C3	17					
C12-6		T	D3	18					
E7-20	D11-20		E1	20					
E7-19	D11-19		E0	19					
			IH	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.15-04
7BTH; A1A/3T01 AD112-C

CODE IDENT 34010 D
DWG NO 60458180
REV J
SHEET CMC 4.15-04A 17-203

12155 LOC: E5 NAME: BT10

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D1-7		T	A1	2	BYTE 5	8	T1	TERM	
D1-11		T	B1	1	BIT 40	7	F1	F5-5	
D1-14		T	A2	4	BYTE 5	5	T2	TERM	
D2-7		T	B2	3	BIT 41	6	F2	F5-1	
D2-11		T	A3	16	BYTE 5	13	T3	TERM	
D2-14		T	B3	15	BIT 42	14	F3	F5-17	
D3-7		T	A4	18	BYTE 5	12	T4	TERM	
D3-11		T	B4	17	BIT 43	11	F4	F4-4	
			C1	24					
			C2	23					
G1-1	E5-19		E1	20					
E5-20	E6-19		E2	19					
			MS	22					

12155 LOC: E6 NAME: BT11

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D3-14		T	A1	2	BYTE 5	8	T1	TERM	
D4-7		T	B1	1	BIT 44	7	F1	F4-5	
D4-11		T	A2	4	BYTE 5	5	T2	TERM	
D4-14		T	B2	3	BIT 45	6	F2	F4-22	
D5-7		T	A3	16	BYTE 5	13	T3	TERM	
D5-11		T	B3	15	BIT 46	14	F3	F4-23	
D5-14		T	A4	18	BYTE 5	12	T4	TERM	
D6-7		T	B4	17	BIT 47	11	F4	F4-24	
			C1	24					
			C2	23					
E6-19	E9-20		E1	20					
E5-19	E6-20		E2	19					
			MS	22					

12155 LOC: E9 NAME: BT20

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D6-11		T	A1	2	BYTE 6	8	T1	TERM	
D6-14		T	B1	1	BIT 48	7	F1	F5-4	
D7-7		T	A2	4	BYTE 6	5	T2	TERM	
D7-11		T	B2	3	BIT 49	6	F2	F5-24	
D7-14		T	A3	16	BYTE 6	13	T3	TERM	
D8-7		T	B3	15	BIT 50	14	F3	F5-16	
D8-11		T	A4	18	BYTE 6	12	T4	TERM	
D8-14		T	B4	17	BIT 51	11	F4	F8-4	
			C1	24					
			C2	23					
E6-20	E9-19		E1	20					
E9-20		T	E2	19					
			MS	22					

12155 LOC: E10 NAME: BT21

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D9-7		T	A1	2	BYTE 6	8	T1	TERM	
D9-11		T	B1	1	BIT 52	7	F1	F8-24	
D9-14		T	A2	4	BYTE 6	5	T2	TERM	
D10-7		T	B2	3	BIT 53	6	F2	F8-16	
D10-11		T	A3	16	BYTE 6	13	T3	TERM	
D10-14		T	B3	15	BIT 54	14	F3	F12-4	
D11-7		T	A4	18	BYTE 6	12	T4	TERM	
D11-11		T	B4	17	BIT 55	11	F4	F12-24	
			C1	24					
			C2	23					
G1-2	E10-19		E1	20					
E10-20	E11-19		E2	19					
			MS	22					

12155 LOC: E11 NAME: BT30

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D11-14		T	A1	2	BYTE 7	8	T1	TERM	
D12-7		T	B1	1	BIT 56	7	F1	F11-1	
D12-11		T	A2	4	BYTE 7	5	T2	TERM	
D12-14		T	B2	3	BIT 57	6	F2	F11-2	
D13-7		T	A3	16	BYTE 7	13	T3	TERM	
D13-11		T	B3	15	BIT 58	14	F3	F11-3	
D13-14		T	A4	18	BYTE 7	12	T4	TERM	
D14-7		T	B4	17	BIT 59	11	F4	F11-4	
			C1	24					
			C2	23					
E11-19	E12-20		E1	20					
E10-19	E11-20		E2	19					
			MS	22					

12155 LOC: E12 NAME: BT31

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D14-11		T	A1	2	BYTE 7	8	T1	TERM	
D14-14		T	B1	1	BIT 60	7	F1	F11-5	
E7-7		T	A2	4	BYTE 7	5	T2	TERM	
E7-11		T	B2	3	BIT 61	6	F2	F11-22	
E7-14		T	A3	16	BYTE 7	13	T3	TERM	
E8-7		T	B3	15	BIT 62	14	F3	F12-3	
E8-11		T	A4	18	BYTE 7	12	T4	TERM	
E8-14		T	B4	17	BIT 63	11	F4	F11-24	
			C1	24					
			C2	23					
E11-20	E12-19		E1	20					
E12-20		T	E2	19					
			MS	22					

12160 LOC: F11 NAME: B3P

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
E11-7	F5-3		A1	1	BIT 56	7	T1	F12-15	
E11-6	F5-23		A2	2	BIT 57				
E11-14	F5-15		A3	3	BIT 58				
E11-11	F8-3		A4	4	BIT 59				
E12-7	F8-23		A5	5	BIT 60				
E12-6	F8-15		A6	22	BIT 61				
F12-3		T	A7	23	BIT 62				
E12-11	F12-23		A8	24	BIT 63				
			PI	6					

12160 LOC: F4 NAME: B2P

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F5-4		T	A1	13	BIT 48	11	T1	F12-16	
F5-24		T	A2	14	BIT 49				
F5-16		T	A3	15	BIT 50				
F8-4		T	A4	16	BIT 51				
F8-24		T	A5	17	BIT 52				
F8-16		T	A6	18	BIT 53				
F12-4		T	A7	19	BIT 54				
F12-24		T	A8	20	BIT 55				
			PI	12					

12160 LOC: F4 NAME: B1P

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F5-5		T	A1	1	BIT 40	7	T1	F12-17	
F5-1		T	A2	2	BIT 41				
F5-17		T	A3	3	BIT 42				
E5-11	F8-5		A4	4	BIT 43				
E6-7	F8-1		A5	5	BIT 44				
E6-6	F8-17		A6	22	BIT 45				
E6-14	F12-5		A7	23	BIT 46				
E6-11	F12-1		A8	24	BIT 47				
			PI	6					

12171 LOC: F5 NAME: RW3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F11-1		T	A1	3	R/W BYTES 0-7 BIT 0	7	T1	PIC-60	
E9-7	F4-13		B1	4		8	F1	TP-32	
E5-7	F4-1		C1	5					
PIC-59		T	D1	6					
F11-2		T	A2	23	R/W BYTES 0-7 BIT 1	11	T2	PIC-55	
E9-6	F4-14		B2	24		12	F2	TP-33	
E5-6	F4-2		C2	1					
PIC-63		T	D2	2					
F11-3		T	A3	15	R/W BYTES 0-7 BIT 2	14	T3	PIC-64	
E9-14	F4-15		B3	16		13	F3	TP-35	
E5-14	F4-3		C3	17					
PIC-68		T	D3	18					
E4-12	F8-20		E1	20					
E4-13	F8-19		E0	19					
			IH	22					

12171 LOC: F8 NAME: RW4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E11-11		T	A1	3	R/W BYTES 0-7 BIT 3	7	T1	PIC-79	
E9-11	F4-16		B1	4		8	F1	TP-38	
F4-4		T	C1	5					
PIC-88		T	D1	6					
F11-5		T	A2	23	R/W BYTES 0-7 BIT 4	11	T2	PIC-80	
E10-7	F4-17		B2	24		12	F2	TP-37	
F4-5		T	C2	1					
PIC-91		T	D2	2					
F11-22		T	A3	15	R/W BYTES 0-7 BIT 5	14	T3	PIC-87	
E10-6	F4-18		B3	16		13	F3	TP-39	
F4-22		T	C3	17					
PIC-98		T	D3	18					
F5-20	F12-20		E1	20					
F5-19	F12-19		E0	19					
			IH	22					

12171 LOC: F12 NAME: RW5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E12-14	F11-23		A1	3	R/W BYTES 0-7 BIT 6	7	T1	PIC-138	
E10-14	F4-19		B1	4		8	F1	TP-43	
F4-23		T	C1	5					
PIC-137		T	D1	6					
F11-24		T	A2	23	R/W BYTES 0-7 BIT 7	11	T2	PIC-133	
E10-11	F4-20		B2	24		12	F2	TP-42	
F4-24		T	C2	1					
PIC-150		T	D2	2					
F11-7		T	A3	15	R/W BYTES 0-7 PARITY	14	T3	PIC-186	
F4-11		T	B3	16		13	F3	TP-44	
F4-7		T	C3	17					
PIC-185		T	D3	18					
F8-20		T	E1	20					
F8-19		T	E0	19					
			IH	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.15.-04
7BTH; A1A/3T01
AD112-C

CODE IDENT 34010
D
DWG NO 60458180
REV J
SHEET CMC 4.15-04B 17-204

LEFT ZIF △1

BIT NAME		I/Ø	SHEET	TYPE	VIRTUAL PIN	REAL PIN
CSUCNP (0)	ØSCL 2	I	00	D	T05	P2A-39
CSUCN (0)					6	40
(1)					7	37
(1)	ØSCL 2				8	38
(2)	CLKTUN				9	33
(2)	CLKTUN				A	35
(3)	PEVNWN				B	32
(3)	PEVNWN				C	34
CSUCNP (4)	NU				D	29
CSUCN (4)	NU		00	D	T0E	31
LELA0A	LELA0B		01	Z	T16	07
LELA4A	LELA4B				7	08
LELA8A	LELA8B				T18	P2A-10
A16DPE (6)	DPE (1)				T22	P1A-35
(7)	(2)				3	37
(8)	(3)				4	38
(9)	(4)				5	39
(10)	(5)				6	P1A-40
(11)	(6)				7	P2A-01
A16DPE (12)	DPE (7)		01		T28	02
CLRERR	CLERB		03		T59	18
DSBL21	NU				A	27
DSBL	DSBL		03		B	30
SS00 (29)	UNCERR		04		C	13
(30)	CØRERR				D	P2A-14
(24)	ØI12(56)				E	P1A-09
(25)	(57)				T5F	07
(26)	(58)				T60	12
SS00 (31)	ØI12(63)				T61	P1A-10
ØI12 (8)	NU				T74	P2A-28
(9)					5	26
(10)					6	23
(11)					7	24
(12)					8	21
(13)					9	22
(14)					A	19
(15)					B	P2A-20
(16)					C	P1A-20
(17)					D	18
(18)					E	14
(19)					T7F	19
(20)					T80	17
(21)					1	15
(22)					2	13
ØI12 (23)		I	04		T83	11
ØI12Ø (16)	NU	Ø	00		TA0	26
(19)	ØI12 (56)				1	23
(20)	(57)				2	21
(21)	(58)				3	24
ØI12Ø (22)	ØI12 (63)		00		4	P1A-22
WRNB0 (1)	WRNB0 (5)		01		5	P2A-06
(2)	(6)				6	04
WRNB0 (3)	WRNB0 (7)				7	03
LELA0B	NU				8	09
LELA4B					TA9	11
LELA8B	NU		01		TAA	P2A-12
BDS21 (40)	BDS21 (40)		03		TBC	P1A-33
(41)	(41)				D	34
(42)	(42)				E	31
(43)	(43)				TBF	32
(44)	(44)				TC0	29
(45)	(45)				1	30
(46)	(46)				2	27
BDS21 (47)	BDS21 (47)	Ø	03	Z	TC3	P1A-28

ZIF GRØUND PINS			
P1A-05	P1A-25	P2A-05	P2A-25
P1A-16	P1A-36	P2A-16	P2A-36

CØAX △1

BIT NAME		I/Ø	SHEET	TYPE	VIRTUAL PIN	REAL PIN
MCK	NCLKN (386)	I	00	C	T00	P1C-71
PHM	CLKPM (68)				T01	67
RGSL (0)	RGSLB (0)				T11	52
(1)	(1)				2	07
(2)	(2)				3	12
RGSL (3)	RGSLB (3)		00		T14	08
PCDDPE	DPE (0)		01		T21	51
PC2SYN	SYN (0)		02		9	125
ADRSYN (6)	(1)				A	129
(7)	(2)				B	145
(8)	(3)				C	141
(9)	(4)				D	142
(10)	(5)				E	146
(11)	(6)				T2F	97
ADRSYN (12)	SYN (7)				T30	92
PTPECD (0)	PECD(2)				1	134
PTPECD (1)	PECD(3)				2	130
PTCD18 (0)	RDPERR (2)				3	162
(1)	(3)				4	158
PTCD18 (2)	(4)				5	153
ADRS18 (6)	(5)				6	157
(7)	(6)				7	182
(8)	RDPERR (7)				8	178
(9)	PWPEBY (0)				9	166
(10)	(1)				T3A	177
(11)	(2)				T41	126
(12)	(3)				2	121
(13)	(4)				3	109
(14)	(5)				4	114
(15)	(6)				5	122
(16)	PWPEBY (7)				6	117
(17)	NU				7	113
(18)	NU				T48	118
(19)	TDPE (0)				T51	170
(20)	(1)				2	169
(21)	(2)				3	154
(22)	(3)				4	174
(23)	(4)				5	181
(24)	(5)				6	173
(25)	(6)				7	161
ADRS18 (26)	TDPE (7)		02		T58	165
RW04 (0)	RW04B (0)		04		T84	59
(1)	(1)				5	63
(2)	(2)				6	68
(3)	(3)				7	88
(4)	(4)				8	91
(5)	(5)				9	98
(6)	(6)				A	137
(7)	(7)				B	150
RW04 (8)	RW04B (8)	I	04		T8C	185
PC2DPE	TDPE (0)	Ø	01		TB3	75
ADRDPE (6)	(1)				4	102
(7)	(2)				5	83
(8)	(3)				6	101
(9)	(4)				7	76
(10)	(5)				8	84
(11)	(6)				9	105
ADRDPE (12)	TDPE (7)		01		A	110
CMSSØ	CMSSØ		03		TBB	149
DINPE	DINPE		04		TD4	106
CTMDØ (0)	CTMDB (0)				5	60
(1)	(1)				6	55
(2)	(2)				7	64
(3)	(3)				8	79
(4)	(4)				9	80
(5)	(5)				A	87
(6)	(6)				B	138
(7)	CTMDB (7)				C	133
CTMDØ (8)	RWPARB	Ø	04		TDD	186
RGSLP	RGSLPB (0)	I	01	C	T15	P1C-56
ELIDIO(14)	ELIDIO(46)	I	04	C	X00	P1C-39
ELIDIO(15)	ELIDIO(47)	I	04	C	X01	P1C-40

RIGHT ZIF △1

BIT NAME		I/Ø	SHEET	TYPE	VIRTUAL PIN	REAL PIN
BYTSL (0)	BYTSLB (0)	I	00	Z	T02	P2B-08
(1)	(1)				3	09
BYTSL (2)	BYTSLB (2)				4	P2B-10
WRTP	WRTP (B)				T0F	P1B-39
WRT	WRT (B)		00		T10	40
MCWRTA (0)	MCWRTB (0)		01		9	29
(1)	(1)				A	31
(2)	(2)				B	32
(3)	(3)				C	33
(4)	(4)				D	34
(5)	(5)				E	35
(6)	(6)				T1F	37
MCWRTA (7)	MCWRTB (7)		01		T20	P1B-38
ADRS (13)	MARKM(0)		02		T3B	P2B-11
(14)	(1)				C	12
(15)	(2)				D	13
(16)	(3)				E	14
(17)	(4)				T3F	15
(18)	(5)				T40	17
(19)	(6)				9	18
(20)	(7)				A	19
(21)	MARKM(8)				B	20
(22)	FNCD(0)				C	01
(23)	(1)				D	02
(24)	(2)				E	03
(25)	(3)				T4F	04
ADRS (26)	FNCD(8)		02		T50	06
ELIDIO (10)	ELIDIO (42)		04		T62	21
(11)	(43)				3	22
(16)	(48)				4	23
(17)	(49)				5	24
(18)	(50)				6	26
(19)	(51)				7	27
(20)	(52)				8	28
(21)	(53)				9	29
(22)	(54)				A	30
(23)	(55)				B	31
(24)	(56)				C	32
(25)	(57)				D	33
(26)	(58)				E	34
(27)	(59)				T6F	35
(28)	(60)				T70	37
(29)	(61)				1	38
(30)	(62)				2	39
ELIDIO (31)	ELIDIO (63)	I	04		T73	P2B-40
MACWRT (0)	NU	Ø	01		TAB	P1B-21
(1)					C	22
(2)					D	23
(3)					E	24
(4)					TAF	26
(5)					TB0	27
(6)					1	28
MACWRT (7)	NU		01		TB2	30
BDS21 (48)	BDS21 (48)		03		TC4	01
(49)	(49)				5	02
(50)	(50)				6	03
(51)	(51)				7	04
(52)	(52)				8	06
(53)	(53)				9	07
(54)	(54)				A	08
(55)	(55)				B	09
(56)	(56)				C	10
(57)	(57)				D	11
(58)	(58)				E	12
(59)	(59)				TCF	13
(60)	(60)				TD0	14
(61)	(61)				1	15
(62)	(62)				2	17
BDS21 (63)	BDS21 (63)	Ø	03	Z	TD3	P1B-18

ZIF GRØUND PINS			
P1B-05	P1B-25	P2B-05	P2B-25
P1B-16	P1B-36	P2B-16	P2B-36

NØTES:

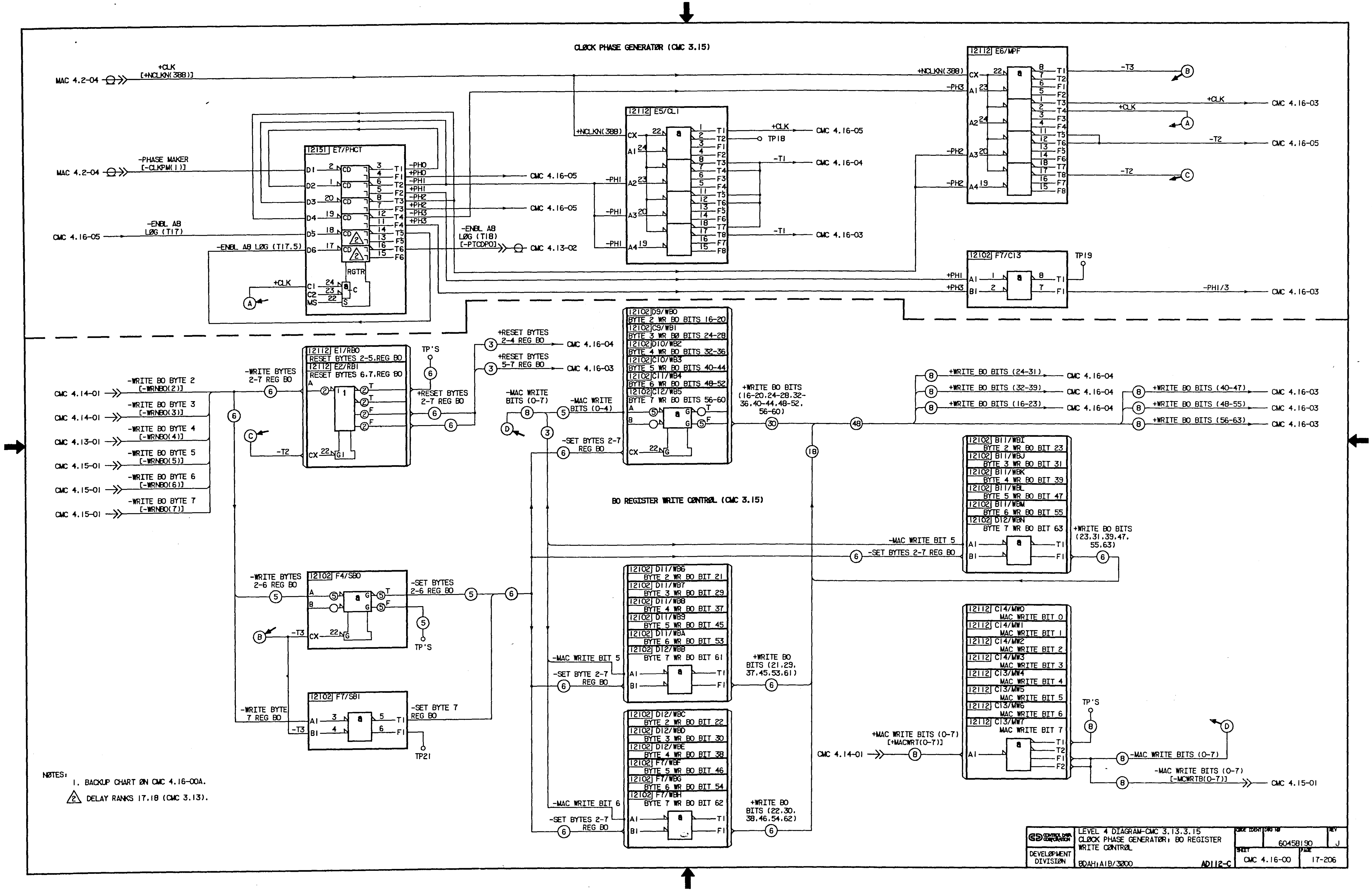
△1 CØNNECTØR TYPES:

C = CØAX
D = DIFFERENTIAL
Z = ZIF TØ FØIL ØN INTERCØNNECT BØARD

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 CØNNECTØR CHART
SUPPLEMENTAL WIRING INFØRMATIØN
7BTH:A1A/3T01
AD112-C

CAGE IDENT | DWG NO 60458190 | REV J
SHEET CMC 4.15-CC | PAGE 17-205



NOTES:
1. BACKUP CHART ON CMC 4.16-00A.
⚠2 DELAY RANKS 17,18 (CMC 3.13).

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.13,3.15
CLOCK PHASE GENERATOR; B0 REGISTER
WRITE CONTROL

BDAH;A1B/3000 AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CMC 4.16-00
PAGE 17-206

12112 LOC: E1 NAME: RB0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-19	F4-1		A1	24	RESET BYTE 2 REG B0	1	T1	TP-05	
						2	T2	TERM	
						3	F1	C8-23	2
						4	F2	C2-19	2
P2A-20	F4-3		A2	23	RESET BYTE 3 REG B0	8	T3	TP-02	
						7	T4	TERM	
						6	F3	C7-18	2
						5	F4	C4-19	2
P2A-17	F4-17		A3	20	RESET BYTE 4 REG B0	11	T5	TP-03	
						12	T6	TERM	
						13	F5	C7-23	2
						14	F6	C6-19	2
P2A-15	F4-19		A4	19	RESET BYTE 5 REG B0	18	T7	TP-04	
						17	T8	TERM	
						16	F7	F11-18	2
						15	F8	D13-19	2
E2-22		T	CX	22	-T2				

12112 LOC: E2 NAME: RB1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P2A-16	F4-23		A1	24	RESET BYTE 6 REG B0	1	T1	TP-07	
						2	T2	TERM	
						3	F1	F11-3	2
						4	F2	E11-19	2
P2A-14	F7-3		A2	23	RESET BYTE 7 REG B0	8	T3	TP-06	
						7	T4	TERM	
						6	F3	F12-23	2
						5	F4	E13-19	2
			A3	20		11	T5		
						12	T6		
						13	F5		
						14	F6		
			A4	19		18	T7		
						17	T8		
						16	F7		
						15	F8		
E6-17	E1-22		CX	22	-T2				

12102 LOC: D9 NAME: WB0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C9-1	D10-1		A1	1	BYTE 2	8	T1	TERM	
			B1	2	WR B0 BIT 16	7	F1	C8-4	1
C9-3	D10-3		A2	3	BYTE 2	5	T2	TERM	
			B2	4	WR B0 BIT 17	6	F2	C8-2	1
C9-18	D10-18		A3	18	BYTE 2	16	T3	TERM	
			B3	17	WR B0 BIT 18	15	F3	C2-4	1
C9-20	D10-20		A4	20	BYTE 2	13	T4	TERM	
			B4	19	WR B0 BIT 19	14	F4	C2-2	1
C9-24	D10-24		A5	24	BYTE 2	12	T5	TERM	
			B5	23	WR B0 BIT 20	11	F5	C2-17	1
F4-8	D11-2		CX	22					

12102 LOC: C9 NAME: WB1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C10-1	D9-1		A1	1	BYTE 3	8	T1	TERM	
			B1	2	WR B0 BIT 24	7	F1	C7-17	1
C10-3	D9-3		A2	3	BYTE 3	5	T2	TERM	
			B2	4	WR B0 BIT 25	6	F2	C8-17	1
C10-18	D9-18		A3	18	BYTE 3	16	T3	TERM	
			B3	17	WR B0 BIT 26	15	F3	C4-4	1
C10-20	D9-20		A4	20	BYTE 3	13	T4	TERM	
			B4	19	WR B0 BIT 27	14	F4	C4-2	1
C10-24	D9-24		A5	24	BYTE 3	12	T5	TERM	
			B5	23	WR B0 BIT 28	11	F5	C4-17	1
F4-5	D11-4		CX	22					

12102 LOC: D10 NAME: WB2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D9-1		T	A1	1	BYTE 4	8	T1	TERM	
			B1	2	WR B0 BIT 32	7	F1	C7-4	1
D9-3		T	A2	3	BYTE 4	5	T2	TERM	
			B2	4	WR B0 BIT 33	6	F2	C7-2	1
D9-18		T	A3	18	BYTE 4	16	T3	TERM	
			B3	17	WR B0 BIT 34	15	F3	D6-4	1
D9-20		T	A4	20	BYTE 4	13	T4	TERM	
			B4	19	WR B0 BIT 35	14	F4	D6-2	1
D9-24		T	A5	24	BYTE 4	12	T5	TERM	
			B5	23	WR B0 BIT 36	11	F5	D6-17	1
F4-16	D11-18		CX	22					

12102 LOC: C10 NAME: WB3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C14-3	C9-1		A1	1	BYTE 5	8	T1	TERM	
			B1	2	WR B0 BIT 40	7	F1	F11-2	1
C14-6	C9-3		A2	3	BYTE 5	5	T2	TERM	
			B2	4	WR B0 BIT 41	6	F2	F11-17	1
C14-13	C9-18		A3	18	BYTE 5	16	T3	TERM	
			B3	17	WR B0 BIT 42	15	F3	D14-4	1
C14-16	C9-20		A4	20	BYTE 5	13	T4	TERM	
			B4	19	WR B0 BIT 43	14	F4	D14-2	1
C13-4	C9-24		A5	24	BYTE 5	12	T5	TERM	
			B5	23	WR B0 BIT 44	11	F5	D14-17	1
F7-18	D11-20		CX	22					

12102 LOC: C11 NAME: WB4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C12-1	P1B-31		A1	1	BYTE 6	8	T1	TERM	
			B1	2	WR B0 BIT 48	7	F1	F12-17	1
C12-3	P1B-32		A2	3	BYTE 6	5	T2	TERM	
			B2	4	WR B0 BIT 49	6	F2	F11-4	1
C12-18	P1B-34		A3	18	BYTE 6	16	T3	TERM	
			B3	17	WR B0 BIT 50	15	F3	E12-4	1
C12-20	P1B-35		A4	20	BYTE 6	13	T4	TERM	
			B4	19	WR B0 BIT 51	14	F4	E12-2	1
C12-24	P1B-36		A5	24	BYTE 6	12	T5	TERM	
			B5	23	WR B0 BIT 52	11	F5	E12-17	1
D11-24	B11-24		CX	22					

12102 LOC: C12 NAME: WB5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C14-4	C11-1		A1	1	BYTE 7	8	T1	TERM	
			B1	2	WR B0 BIT 56	7	F1	F12-4	1
C14-5	C11-3		A2	3	BYTE 7	5	T2	TERM	
			B2	4	WR B0 BIT 57	6	F2	F12-2	1
C14-14	C11-18		A3	18	BYTE 7	16	T3	TERM	
			B3	17	WR B0 BIT 58	15	F3	E14-4	1
C14-15	C11-20		A4	20	BYTE 7	13	T4	TERM	
			B4	19	WR B0 BIT 59	14	F4	E14-2	1
C13-3	C11-24		A5	24	BYTE 7	12	T5	TERM	
			B5	23	WR B0 BIT 60	11	F5	E14-17	1
D12-24		T	CX	22					

12112 LOC: C14 NAME: MW0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-21		T	A1	24	MAC WRITE BIT 0	1	T1	TP-45	
						2	T2	TERM	
						3	F1	C10-1	1
						4	F2	C12-1	

12112 LOC: C14 NAME: MW1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-22		T	A1	23	MAC WRITE BIT 1	8	T1	TP-42	
						7	T2	TERM	
						6	F1	C10-3	1
						5	F2	C12-3	

12112 LOC: C14 NAME: MW2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-24		T	A1	20	MAC WRITE BIT 2	11	T1	TP-41	
						12	T2	TERM	
						13	F1	C10-18	1
						14	F2	C12-18	

12112 LOC: C14 NAME: MW3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-25		T	A1	19	MAC WRITE BIT 3	18	T1	TP-44	
						17	T2	TERM	
						16	F1	C10-20	1
						15	F2	C12-20	

12112 LOC: C13 NAME: MW4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-26		T	A1	24	MAC WRITE BIT 4	1	T1	TP-39	
						2	T2	TERM	
						3	F1	C12-24	
						4	F2	C10-24	

12112 LOC: C13 NAME: MW5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-27		T	A1	23	MAC WRITE BIT 5	8	T1	TP-36	
						7	T2	TERM	
						6	F1	D12-1	1
						5	F2	D11-19	

12112 LOC: C13 NAME: MW6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-29		T	A1	20	MAC WRITE BIT 6	11	T1	TP-35	
						12	T2	TERM	
						13	F1	D12-3	
						14	F2	D12-17	2

12112 LOC: C13 NAME: MW7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1B-30		T	A1	19	MAC WRITE BIT 7	18	T1	TP-38	
						17	T2	TERM	
						16	F1	B11-1	
						15	F2	B11-3	2

12102 LOC: F4 NAME: SB0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
E1-24		T	A1	1	SET BYTE 2	8	T1	D9-22	
			B1	2	REG B0	7	F1	TP-11	
E1-23		T	A2	3	SET BYTE 3	5	T2	C9-22	
			B2	4	REG B0	6	F2	TP-14	
E1-20		T	A3	17	SET BYTE 4	16	T3	D10-22	
			B3	18	REG B0	15	F3	TP-15	
E1-19		T	A4	19	SET BYTE 5	13	T4	F7-18	
			B4	20	REG B0	14	F4	TP-13	
E2-24		T	A5	23	SET BYTE 6	12	T5	F7-20	
			B5	24	REG B0	11	F5	TP-12	
E6-8	F7-4		CX	22					

12102 LOC: D11 NAME: WB6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D12-1	D11-3		A1	1	BYTE 2	8	T1	TERM	
D9-22	D12-4		B1	2	WR B0 BIT 21	7	F1	C3-4	1

12102 LOC: D11 NAME: WB7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D11-1	D11-23		A1	3	BYTE 3	5	T1	TERM	
C9-22	D12-18		B1	4	WR B0 BIT 29	6	F1	C5-4	1

12102 LOC: D11 NAME: WB8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D11-19	P1B-37		A1	17	BYTE 4	16	T1	TERM	
D10-22	D12-20		B1	18	WR B0 BIT 37	15	F1	C6-4	1

12102 LOC: D11 NAME: WB9

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-5	D11-17		A1	19	BYTE 5	13	T1	TERM	
C10-22	B11-20		B1	20	WR B0 BIT 45	14	F1	D13-4	1

12102 LOC: D11 NAME: WBA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D11-3		T	A1	23	BYTE 6	12	T1	TERM	
F7-20	C11-22		B1	24	WR B0 BIT 53	11	F1	E11-4	1

12102 LOC: D12 NAME: WBB

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-6	D11-1		A1	1	BYTE 7	8	T1	TERM	
F7-24	D12-24		B1	2	WR B0 BIT 61	7	F1	E13-4	1

12102 LOC: D12 NAME: WBC

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-13	F7-23		A1	3	BYTE 2	5	T1	TERM	
D11-2	B11-2		B1	4	WR B0 BIT 22	6	F1	C3-2	1

12102 LOC: D12 NAME: WBD

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-14	D12-19		A1	17	BYTE 3	16	T1	TERM	
D11-4	B11-4		B1	18	WR B0 BIT 30	15	F1	C5-2	1

12102 LOC: D12 NAME: WBE

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D12-17	P1B-39		A1	19	BYTE 4	13	T1	TERM	
D11-18	B11-18		B1	20	WR B0 BIT 38	14	F1	C6-2	1

12102 LOC: F7 NAME: WBF

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F7-19		T	A1	17	BYTE 5	16	T1	TERM	
F4-13	C10-22		B1	18	WR B0 BIT 46	15	F1	D13-2	1

12102 LOC: F7 NAME: WBG

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F7-23	F7-17		A1	19	BYTE 6	13	T1	TERM	
F4-12	D11-24		B1	20	WR B0 BIT 54	14	F1	E11-2	1

12102 LOC: F7 NAME: WBH

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D12-3	F7-19		A1	23	BYTE 7	12	T1	TERM	
F7-5	D12-2		B1	24	WR B0 BIT 62	11	F1	E13-2	1

12102 LOC: B11 NAME: WBI

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-16	D12-23		A1	1	BYTE 2	8	T1	TERM	
D12-4		T	B1	2	WR B0 BIT 23	7	F1	C3-17	1

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.16-00
6DAH: A1B/3000
AD112-C

CODE IDENT	34010
	D
DWG NO	60458190.
REV	J
SHEET	CMC 4.16-00A
	17-207

12102 LOC: B11 NAME: WBJ

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C13-15	B11-23		A1	3	BYTE 3	5	T1	TERM	
D12-18		T	B1	4	WR BO BIT 31	6	F1	C5-17	1

12102 LOC: B11 NAME: WBK

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B11-19		T	A1	17	BYTE 4	16	T1	TERM	
D12-20		T	B1	18	WR BO BIT 39	15	F1	C6-17	1

12102 LOC: B11 NAME: WBL

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B11-23	B11-17		A1	19	BYTE 5	13	T1	TERM	
D11-20		T	B1	20	WR BO BIT 47	14	F1	D13-17	1

12102 LOC: B11 NAME: WBM

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B11-3	B11-19		A1	23	BYTE 6	12	T1	TERM	
C11-22		T	B1	24	WR BO BIT 55	11	F1	E11-17	1

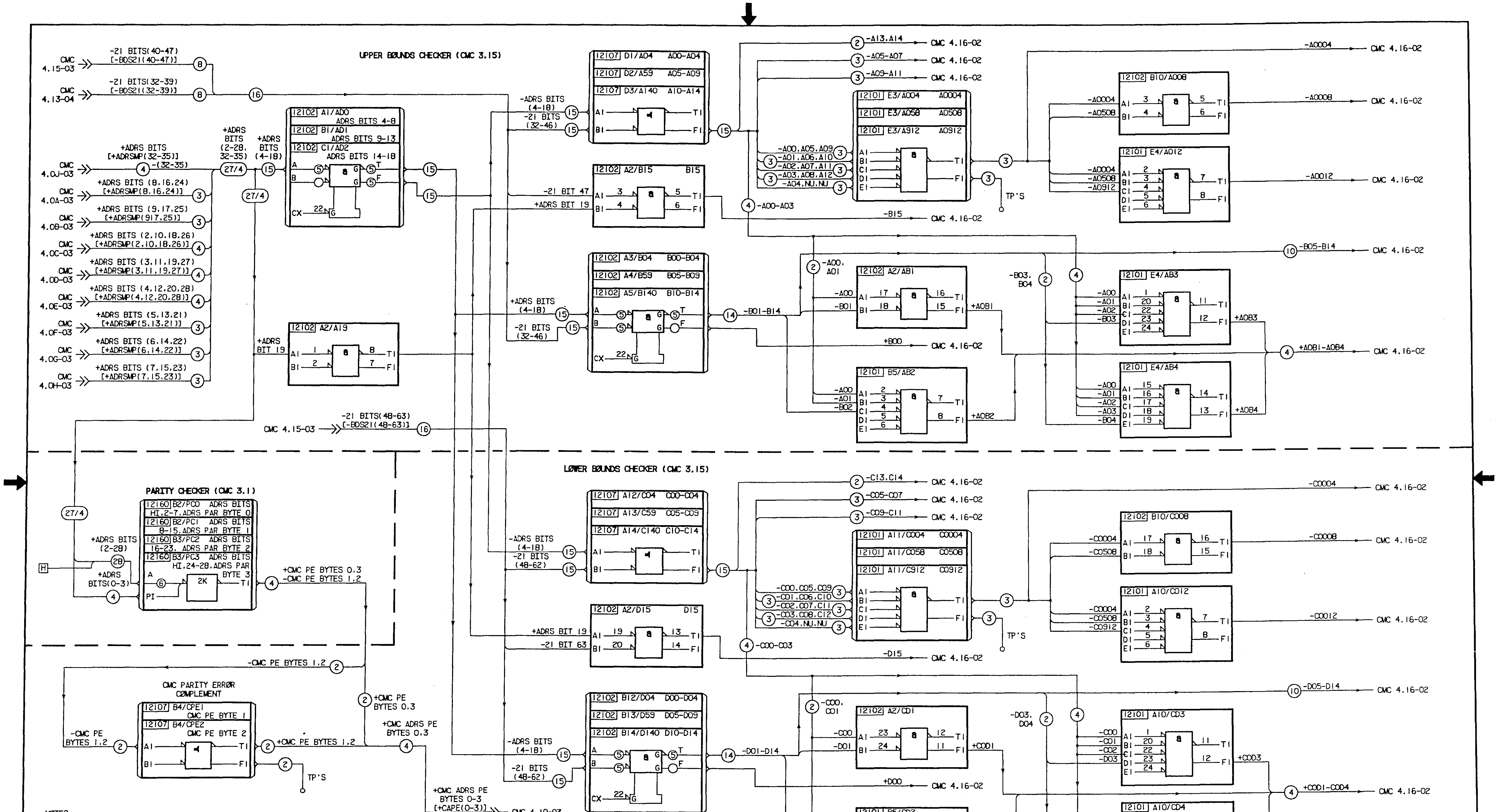
12102 LOC: D12 NAME: WBN

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B11-1	P1B-40		A1	23	BYTE 7	12	T1	TERM	
D12-2	C12-22		B1	24	WR BO BIT 63	11	F1	E13-17	1

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.16-00
8DAH; A1B/3000 AD112 — C

CODE IDENT 34010 D
DWG NO 60458190
REV J
SHEET CMC 4.16-008 17-208



NOTES:

1. BACKUP CHARTS ARE ON SHEET CMC 4.16-01A,CMC 4.16-01B.
2. 21 REGISTER BITS 48-63 ARE COMPARED WITH ADRS BITS 4-19 RESPECTIVELY FOR LOWER BOUNDS COMPARISONS.
   21 REGISTER BITS 32-47 ARE COMPARED WITH ADRS BITS 4-19 RESPECTIVELY FOR UPPER BOUNDS COMPARISONS.

   A00 EQUALS -ADRS BIT 4 = -21 BIT 32,ETC.
   B00 EQUALS +ADRS BIT 4 • -21 BIT 32,ETC.
   C00 EQUALS -ADRS BIT 4 = -21 BIT 48,ETC.
   D00 EQUALS +ADRS BIT 4 • -21 BIT 48,ETC.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM-CMC 3.1.3.15 UPPER/LOWER BOUNDS CHECKER	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION	BDAH:A1B/3000 AD112-C	SHEET CMC 4.16-01	PAGE 17-209	

12102 LOC: A1 NAME: AD0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
P1A-04	B2-4		A1	1	ADRS	8	T1	A3-1	2
			B1	2	BIT 04	7	F1	D1-2	2
P1A-05	B2-5		A2	3	ADRS	5	T2	A3-3	2
			B2	4	BIT 05	6	F2	D1-1	2
P1A-06	B2-22		A3	17	ADRS	16	T3	A3-17	2
			B3	18	BIT 06	15	F3	D1-22	2
P1A-07	B2-23		A4	19	ADRS	13	T4	A3-19	2
			B4	20	BIT 07	14	F4	D1-19	2
P1A-09	B2-13		A5	23	ADRS	12	T5	A3-23	2
			B5	24	BIT 08	11	F5	D1-17	2
			CX	22					

12102 LOC: B1 NAME: AD1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B2-14		T	A1	1	ADRS	8	T1	A4-1	2
			B1	2	BIT 09	7	F1	D2-2	2
B2-15		T	A2	3	ADRS	5	T2	A4-3	2
			B2	4	BIT 10	6	F2	D2-1	2
P1A-12	B2-16		A3	17	ADRS	16	T3	A4-17	2
			B3	18	BIT 11	15	F3	D2-22	2
P1A-14	B2-17		A4	19	ADRS	13	T4	A4-19	2
			B4	20	BIT 12	14	F4	D2-19	2
P1A-15	B2-18		A5	23	ADRS	12	T5	A4-23	2
			B5	24	BIT 13	11	F5	D2-17	2
			CX	22					

12102 LOC: C1 NAME: AD2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B2-19		T	A1	1	ADRS	8	T1	A5-1	2
			B1	2	BIT 14	7	F1	D3-2	2
P1A-17	B2-20		A2	3	ADRS	5	T2	A5-3	2
			B2	4	BIT 15	6	F2	D3-1	2
P1A-19	B3-1		A3	17	ADRS	16	T3	A5-17	2
			B3	18	BIT 16	15	F3	D3-22	2
P1A-20	B3-2		A4	19	ADRS	13	T4	A5-19	2
			B4	20	BIT 17	14	F4	D3-19	2
P1A-21	B3-3		A5	23	ADRS	12	T5	A5-23	2
			B5	24	BIT 18	11	F5	D3-17	2
			CX	22					

12107 LOC: D1 NAME: A04

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A1-7	A12-2		A1	2	A00	5	T1	TERM	
P2A-21	A3-2		B1	3		4	F1	E3-2	3
A1-6	A12-1		A2	1	A01	7	T2	TERM	
P2A-22	A3-4		B2	24		6	F2	E3-3	3
A1-15	A12-22		A3	22	A02	11	T3	TERM	
P2A-24	A3-18		B3	23		12	F3	E3-4	3
A1-14	A12-19		A4	19	A03	13	T4	TERM	
P2A-25	A3-20		B4	20		14	F4	E3-5	2
A1-11	A12-17		A5	17	A04	15	T5	TERM	
P2A-26	A3-24		B5	18		16	F5	E3-6	1
						8	EQ		

12107 LOC: D2 NAME: A59

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B1-7	A13-2		A1	2	A05	5	T1	TERM	
P2A-27	A4-2		B1	3		4	F1	E3-1	4
B1-6	A13-1		A2	1	A06	7	T2	TERM	
P2A-29	A4-4		B2	24		6	F2	E3-20	3
B1-15	A13-22		A3	22	A07	11	T3	TERM	
P2A-30	A4-18		B3	23		12	F3	D4-18	
B1-14	A13-19		A4	19	A08	13	T4	TERM	
P2A-11	A4-20		B4	20		14	F4	E3-23	1
B1-11	A13-17		A5	17	A09	15	T5	TERM	
P2A-12	A4-24		B5	18		16	F5	E3-15	4
						8	EQ		

12107 LOC: D03 NAME: A140

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C1-7	A14-2		A1	2	A10	5	T1	TERM	
P2A-09	A5-2		B1	3		4	F1	E3-16	3
C1-6	A14-1		A2	1	A11	7	T2	TERM	
P2A-10	A5-4		B2	24		6	F2	E3-17	2
C1-15	A14-22		A3	22	A12	11	T3	TERM	
P2A-07	A5-18		B3	23		12	F3	E3-18	1
C1-14	A14-19		A4	19	A13	13	T4	TERM	
P2A-05	A5-20		B4	20		14	F4	B6-3	2
C1-11	A14-17		A5	17	A14	15	T5	TERM	
P2A-06	A5-24		B5	18		16	F5	B6-22	1
						8	EQ		

12101 LOC: E03 NAME: A004

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D1-4	E4-1		A1	2	A00	7	T1	E4-2	
D1-6	E4-16		B1	3	A01	8	F1	TP-08	
D1-12	E4-22		C1	4	A02				
D1-14	E4-18		D1	5	A03				
D1-16		T	E1	6	A04				

12101 LOC: E3 NAME: A058

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D2-4	D4-3		A1	1	A05	11	T1	E4-3	
D2-6	D4-22		B1	20	A06	12	F1	TP-09	
D4-18		T	C1	22	A07				
D2-14		T	D1	23	A08				
			E1	24					

12101 LOC: E3 NAME: A912

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D2-16	A6-3		A1	15	A09	14	T1	E4-4	
D3-4	A6-22		B1	16	A10	13	F1	TP-10	
D3-6	A6-18		C1	17	A11				
D3-12		T	D1	18	A12				
			E1	19					

12102 LOC: A3 NAME: B04

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A1-8	B12-1		A1	1	B00	8	T1	TERM	
D1-3		T	B1	2		7	F1	B7-6	1
A1-5	B12- 3		A2	3	B01	5	T2	A2-18	1
D1-24		T	B2	4		6	F2	TERM	
A1-16	B12-17		A3	17	B02	16	T3	B5-4	1
D1-23		T	B3	18		15	F3	TERM	
A1-13	B12-19		A4	19	B03	13	T4	E4-23	1
D1-20		T	B4	20		14	F4	TERM	
A1-12	B12-23		A5	23	B04	12	T5	E4-19	1
D1-18		T	B5	24		11	F5	TERM	
			CX	22					

12102 LOC: A4 NAME: B59

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B1-8	B13-1		A1	1	B05	8	T1	B8-2	1
D2-3		T	B1	2		7	F1	TERM	
B1-5	B13-3		A2	3	B06	5	T2	D4-4	1
D2-24		T	B2	4		6	F2	TERM	
B1-16	B13-17		A3	17	B07	16	T3	D4-23	1
D2-23		T	B3	18		15	F3	TERM	
B1-13	B13-19		A4	19	B08	13	T4	D4-19	1
D2-20		T	B4	20		14	F4	TERM	
B1-12	B13-23		A5	23	B09	12	T5	B8-4	1
D2-18		T	B5	24		11	F5	TERM	
			CX	22					

12102 LOC: A5 NAME: B140

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C1-8	B14-1		A1	1	B10	8	T1	A6-4	1
D3-3		T	B1	2		7	F1	TERM	
C1-5	B14-3		A2	3	B11	5	T2	A6-23	1
D3-24		T	B2	4		6	F2	TERM	
C1-16	B14-17		A3	17	B12	16	T3	A6-19	1
D3-23		T	B3	18		15	F3	TERM	
C1-13	B14-19		A4	19	B13	13	T4	B8-18	1
D3-20		T	B4	20		14	F4	TERM	
C1-12	B14-23		A5	23	B14	12	T5	B6-4	1
D3-18		T	B5	24		11	F5	TERM	
			CX	22					

12160 LOC: B2 NAME: PC0

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
			A1	1	"HI"	7	T1	P2B-31	
P1A-01		T	A2	2	BIT 2				
P1A-02		T	A3	3	BIT 3				
A1-2		T	A4	4	BIT 4				
A1-3		T	A5	5	BIT 5				
A1-17		T	A6	22	BIT 6				
A1-19		T	A7	23	BIT 7				
			A8	24					
P1A-35		T	P1	6	PAR BYTE 0				

12160 LOC: B2 NAME: PC1

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A1-23		T	A1	13	BIT 8	11	T1	B4-2	
P1A-10	B1-1		A2	14	BIT 9				
P1A-11	B1-3		A3	15	BIT 10				
B1-17		T	A4	16	BIT 11				
B1-19		T	A5	17	BIT 12				
B1-23		T	A6	18	BIT 13				
P1A-16	C1-1		A7	19	BIT 14				
C1-3		T	A8	20	BIT 15				
P1A-36		T	P1	12	PAR BYTE 1				

12160 LOC: B3 NAME: PC2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
C1-17		T	A1	1	BIT 16	7	T1	B4-1	
C1-19		T	A2	2	BIT 17				
C1-23		T	A3	3	BIT 18				
P1A-22	A2-1		A4	4	BIT 19				
P1A-24		T	A5	5	BIT 20				
P1A-25		T	A6	22	BIT 21				
P1A-26		T	A7	23	BIT 22				
P1A-27		T	A8	24	BIT 23				
P1A-37		T	P1	6	PAR BYTE 2				

12160 LOC: B3 NAME: PC3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
P1A-29		T	A1	13	BIT 24	11	T1	P2B-35	
P1A-30		T	A2	14	BIT 25				
P1A-31		T	A3	15	BIT 26				
P1A-32		T	A4	16	BIT 27				
P1A-34		T	A5	17	BIT 28				
HI-B2			A6	18	"HI"				
			A7	19					
			A8	20					
P1A-39		T	P1	12	PAR BYTE 3				

12107 LOC: B4 NAME: CPE1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B2-11		T	A1	2	CMC PE	5	T1	P2B-32	
			B1	3	BYTE 1	4	F1	TP-17	

12107 LOC: B4 NAME: CPE2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
B3-7		T	A1	1	CMC PE	7	T1	P2B-34	
			B1	24	BYTE 2	6	F1	TP-16	

12107 LOC: A12 NAME: C04

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D1-2		T	A1	2	C00	5	T1	TERM	
P1B-01	B12-2		B1	3		4	F1	A11-2	5
D1-1		T	A2	1	C01	7	T2	TERM	
P1B-02	B12-4		B2	24		6	F2	A11-3	4
D1-22		T	A3	22	C02	11	T3	TERM	
P1B-04	B12-18		B3	23		12	F3	A11-4	3
D1-19		T	A4	19	C03	13	T4	TERM	
P1B-05	B12-20		B4	20		14	F4	A10-18	2
D1-17		T	A5	17	C04	15	T5	TERM	
P1B-06	B12-24		B5	18		16	F5	A11-6	1
						8	EQ		

12107 LOC: A13 NAME: C59

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D2-2		T	A1	2	C05	5	T1	TERM	
P1B-07	B13-2		B1	3		4	F1	A11-1	4
D2-1		T	A2	1	C06	7	T2	TERM	
P1B-09	B13-4		B2	24		6	F2	A11-20	3
D2-22		T	A3	22	C07	11	T3	TERM	
P1B-10	B13-18		B3	23		12	F3	A11-22	2
D2-19		T	A4	19	C08	13	T4	TERM	
P1B-11	B13-20		B4	20		14	F4	A11-23	1
D2-17		T	A5	17	C09	15	T5	TERM	
P1B-12	B13-24		B5	18		16	F5	A11-15	4
						8	EQ		

12107 LOC: A14 NAME: C140

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D3-2		T	A1	2	C10	5	T1	TERM	
P1B-14	B14-2		B1	3		4	F1	A11-16	3
D3-1		T	A2	1	C11	7	T2	TERM	
B14-4		T	B2	24		6	F2	A11-17	2
D3-22		T	A3	22	C12	11	T3	TERM	
B14-18		T	B3	23		12	F3	A11-18	1
D3-19		T	A4	19	C13	13	T4	TERM	
B14-20		T	B4	20		14	F4	B9-20	2
D3-17		T	A5	17	C14	15	T5	TERM	
B14-24		T	B5	18		16	F5	B9-22	1
						8	EQ		

12101 LOC: A11 NAME: C004

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A12-4	A10-15		A1	2	C00	7	T1	A10-2	5
A12-6	A10-20		B1	3	C01	8	F1	TP-32	
A12-12	A10-22		C1	4	C02				
A10-18		T	D1	5	C03				
A12-16		T	E1	6	C04				

12101 LOC: A11 NAME: C058

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A13-4	A7-3		A1	1	C05	11	T1	A10-3	2
A13-6	A7-17		B1	20	C06	12	F1	TP-31	
A13-12	A7-18		C1	22	C07				
A13-14		T	D1	23	C08				
			E1	24					

12101 LOC: A11 NAME: C912

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
A13-16	A8-16		A1	15	C09	14	T1	A10-4	1
A14-4	A8-17		B1	16	C10	13	F1	TP-33	
A14-6	A8-18		C1	17	C11				
A14-12		T	D1	18	C12				
			E1	19					

CONTROL DATA CORPORATION ARDEN HILLS OPERATIONS	LEVEL 4 BACKUP CHART SUPPLEMENTAL WIRING INFORMATION CMC 4.16-01 8DAH; A1B/3000 AD112-C	CODE IDENT 34010	D	DWG NO 60458190
			SHEET CMC 4.16-01A	17-210
				REV J

12102 LOC: B12 NAME: D04

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A3-1		T	A1	1	D00	8	T1	TERM	
A12-3		T	B1	2		7	F1	A9-6	1
A3-3		T	A2	3	D01	5	T2	A2-24	1
A12-24		T	B2	4		6	F2	TERM	
A3-17		T	A3	17	D02	16	T3	B5-22	1
A12-23		T	B3	18		15	F3	TERM	
A3-19		T	A4	19	D03	13	T4	A10-23	1
A12-20		T	B4	20		14	F4	TERM	
A3-23		T	A5	23	D04	12	T5	A10-19	1
A12-18		T	B5	24		11	F5	TERM	
			CX	22					

12102 LOC: B13 NAME: D59

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A4-1		T	A1	1	D05	8	T1	B8-20	1
A13-3		T	B1	2		7	F1	TERM	
A4-3		T	A2	3	D06	5	T2	A7-4	1
A13-24		T	B2	4		6	F2	TERM	
A4-17		T	A3	17	D07	16	T3	A7-23	1
A13-23		T	B3	18		15	F3	TERM	
A4-19		T	A4	19	D08	13	T4	A7-19	1
A13-20		T	B4	20		14	F4	TERM	
A4-23		T	A5	23	D09	12	T5	B8-24	1
A13-18		T	B5	24		11	F5	TERM	
			CX	22					

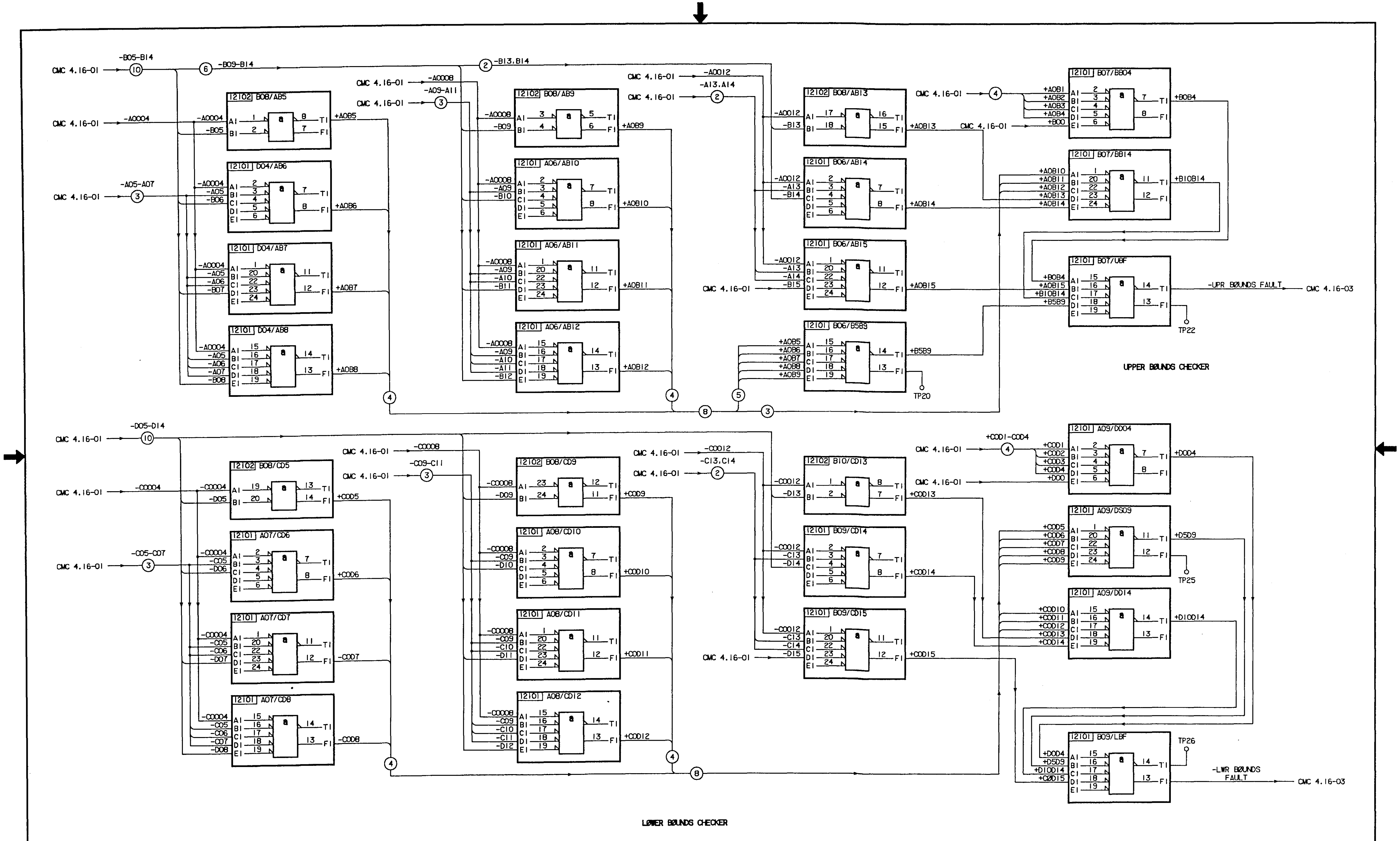
12102 LOC: B14 NAME: D140

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
A5-1		T	A1	1	D10	8	T1	A8-4	1
A14-3		T	B1	2		7	F1	TERM	
A5-3		T	A2	3	D11	5	T2	A8-23	1
P1B-15	A14-24		B2	4		6	F2	TERM	
A5-17		T	A3	17	D12	16	T3	A8-19	1
P1B-16	A14-23		B3	18		15	F3	TERM	
A5-19		T	A4	19	D13	13	T4	B10-2	1
P1B-17	A14-20		B4	20		14	F4	TERM	
A5-23		T	A5	23	D14	12	T5	B9-4	1
P1B-19	A14-18		B5	24		11	F5	TERM	
			CX	22					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.16-01
8DAH; A1B/3000 AD112 – C

CODE IDENT 34010
D
DWG NO 60456190
REV J
SHEET CMC 4.16-01B
17-211



CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CMC 3.15
UPPER/LØWER BØUNDS CHECKER,
BØUNDS FAULT DETECTØR

BDAH,A1B/3000

AD112-C

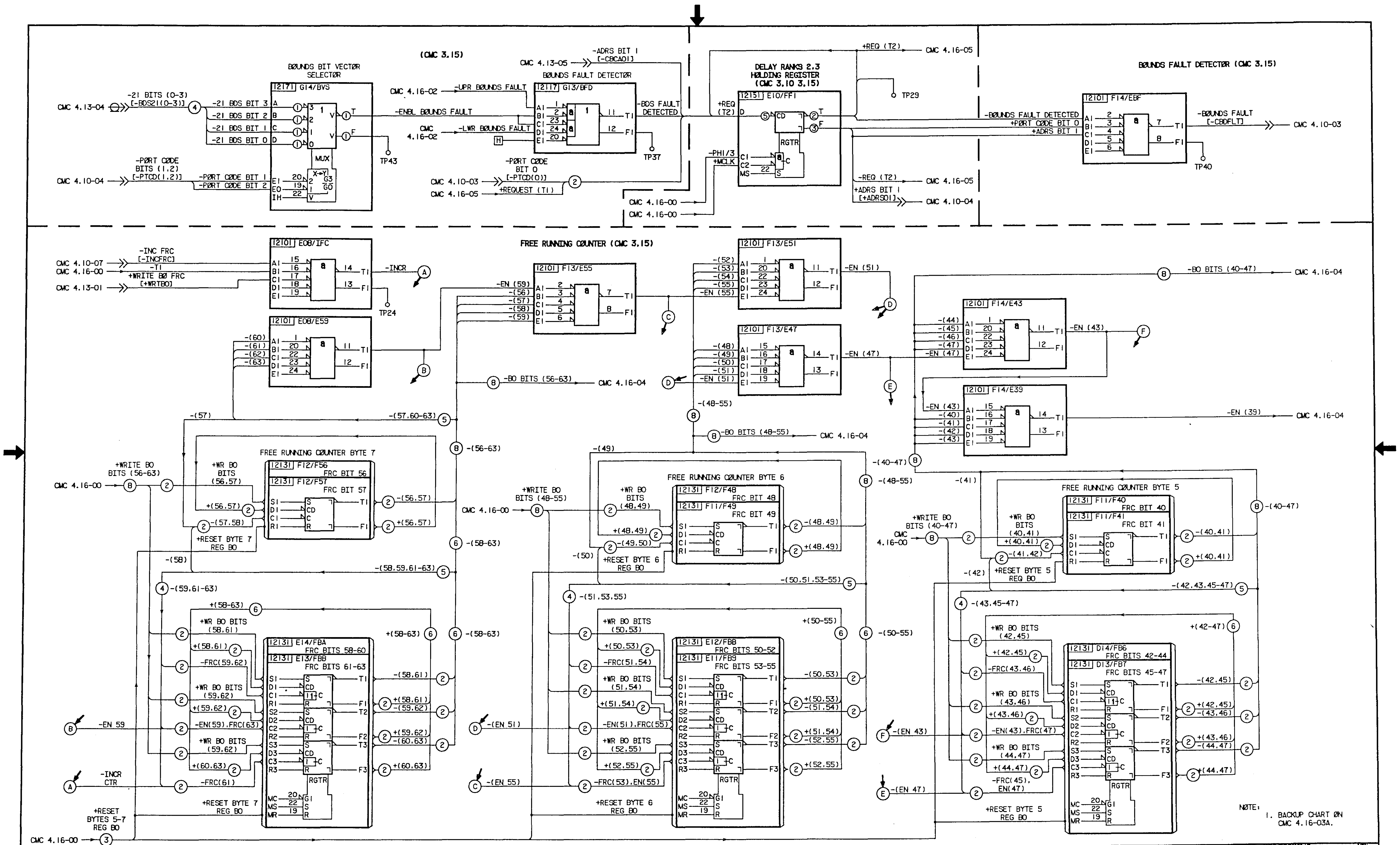
CODE IDENT

DWG NO 60458190

REV J

SHEET CMC 4.16-02

PAGE 17-212



NOTE:
1. BACKUP CHART ON CMC 4.16-03A.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.10.3.15
BOUNDS FAULT DETECTOR; FREE
RUNNING COUNTER

8DAH;A1B/3000 AD112-C

CAGE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.16-03	17-213

12171 LOC: G14 NAME: BVS

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-181		T	A1	3	ENABLE BDS FAULT	7	T1	G13-23	2
PIC-182		T	B1	4		8	F1	TP-43	
PIC-177		T	C1	5					
PIC-178		T	D1	6					
			A2	23		11	T2		
			B2	24		12	F2		
			C2	1					
			D2	2					
			A3	15		14	T3		
			B3	16		13	F3		
			C3	17					
			D3	18					
P2B-11		T	E1	20					
P2B-12		T	E0	19					
			IH	22					

12151 LOC: E10 NAME: FF1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G13-11		T	D1	2	BDS FAULT	3	T1	F14-2	1
					DETECTED	4	F1	TERM	
P2B-10		T	D2	1	PORT CD	6	T2	TERM	
					BIT 0	5	F2	F14-3	1
P2B-39		T	D3	20	ADRS	8	T3	TP-29	
					BIT 01	7	F3	F14-4	1
F9-6		T	D4	19	REQ	12	T4	E10-18	
					(T2)	11	F4	F1-24	
E10-12	D07-16		D5	18	REQ NU	14	T5	TERM	
					(T3)	13	F5		
			D6	17		16	T6		
						15	F6		
F7-7		T	C1	24					
E6-1		T	C2	23					
			MS	22					

12131 LOC: F12 NAME: F56

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C12-7		T	S1	4	FRC BIT 56	7	T1	F13-3	4
F12-8		T	D1	6		8	F1	F12-6	1
F12-11	F13-4		C1	5					
F12-23		T	R1	3					

12131 LOC: F12 NAME: F57

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C12-6		T	S1	2	FRC BIT 57	11	T1	F12-5	4
F12-12		T	D1	24		12	F1	F12-24	1
F13-5	G8-17		C1	1					
E2-6	F12-3		R1	23					

12131 LOC: F12 NAME: F48

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C11-7		T	S1	17	FRC BIT 48	14	T1	F13-15	4
F12-13		T	D1	15		13	F1	F12-15	1
F11-7	F13-16		C1	16					
F11-3		T	R1	18					

12131 LOC: F11 NAME: F49

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C11-6		T	S1	4	FRC BIT 49	7	T1	F12-16	3
F11-6		T	D1	6		8	F1	F11-6	1
F13-17	F8-3		C1	5					
E2-3	F12-18		R1	3					

12131 LOC: F11 NAME: F40

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C10-7		T	S1	2	FRC BIT 40	11	T1	F14-16	3
F11-12		T	D1	24		12	F1	F11-24	1
F11-14	F14-17		C1	1					
F11-18		T	R1	23					

12131 LOC: F11 NAME: F41

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C10-6		T	S1	17	FRC BIT 41	14	T1	F11-1	2
F11-13		T	D1	15		13	F1	F11-15	1
E14-18	F5-15		C1	16					
E1-16	F11-23		R1	18					

12131 LOC: E14 NAME: FBA

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C12-15		T	S1	4	FRC BIT 58	7	T1	F13-5	4
E14-8		T	D1	6		8	F1	E14-6	1
F14-11	F13-6		C1	5					
			R1	3					
C12-14		T	S2	2	FRC BIT 59	11	T2	E14-5	1
E14-12		T	D2	24		12	F2	E14-24	1
E8-11	F13-2		C2	1					
			R2	23					
C12-11		T	S3	17	FRC BIT 60	14	T3	E8-1	3
E14-13		T	D3	15		13	F3	E14-15	1
E13-7	E8-20		C3	16					
			R3	18					
			MC	20					
			MS	22					
E13-19		T	MR	19					

12131 LOC: E13 NAME: FBB

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D12-7		T	S1	4	FRC BIT 61	7	T1	E14-16	4
E13-8		T	D1	6		8	F1	E13-6	1
E13-11	E8-22		C1	5					
			R1	3					
F7-11		T	S2	2	FRC BIT 62	11	T2	E13-5	4
E13-12		T	D2	24		12	F2	E13-24	1
E13-14	E8-23		C2	1					
			R2	23					
D12-11		T	S3	17	FRC BIT 63	14	T3	E13-1	4
E13-13		T	D3	15		13	F3	E13-15	1
E8-14		T	C3	16					
			R3	18					
			MC	20					
			MS	22					
E2-5	E14-19		MR	19					

12131 LOC: E12 NAME: FB8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C11-15		T	S1	4	FRC BIT 50	7	T1	F13-17	4
E12-8		T	D1	6		8	F1	E12-6	1
E12-11	F13-18		C1	5					
			R1	3					
C11-14		T	S2	2	FRC BIT 51	11	T2	E12-5	4
E12-17		T	D2	24		12	F2	E12-24	1
F13-19		T	C2	1					
			R2	23					
C11-11		T	S3	17	FRC BIT 52	14	T3	F13-1	3
E12-13		T	D3	15		13	F3	E12-15	1
E11-7	F13-20		C3	16					
			R3	18					
			MC	20					
			MS	22					
E11-19		T	MR	19					

12131 LOC: E11 NAME: FB9

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D11-11		T	S1	4	FRC BIT 53	7	T1	E12-16	4
E11-8		T	D1	6		8	F1	E11-6	1
E11-11	F13-22		C1	5					
			R1	3					
F7-14		T	S2	2	FRC BIT 54	11	T2	E11-5	4
E11-17		T	D2	24		12	F2	E11-24	1
E11-14	F13-23		C2	1					
			R2	23					
B11-11		T	S3	17	FRC BIT 55	14	T3	E11-1	4
E11-13		T	D3	15		13	F3	E11-15	1
F13-24		T	C3	16					
			R3	18					
			MC	20					
			MS	22					
E2-4	E12-19		MR	19					

12131 LOC: D14 NAME: FB6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C10-15		T	S1	4	FRC BIT 42	7	T1	F14-18	4
D14-8		T	D1	6		8	F1	D14-6	1
D14-11	F14-19		C1	5					
			R1	3					
C10-14		T	S2	2	FRC BIT 43	11	T2	D14-5	4
D14-24		T	D2	24		12	F2	D14-24	1
F14-15		T	C2	1					
			R2	23					
C10-11		T	S3	17	FRC BIT 44	14	T3	F14-1	3
D14-13		T	D3	15		13	F3	D14-15	1
D13-7	F14-20		C3	16					
			R3	18					
			MC	20					
			MS	22					
D13-19		T	MR	19					

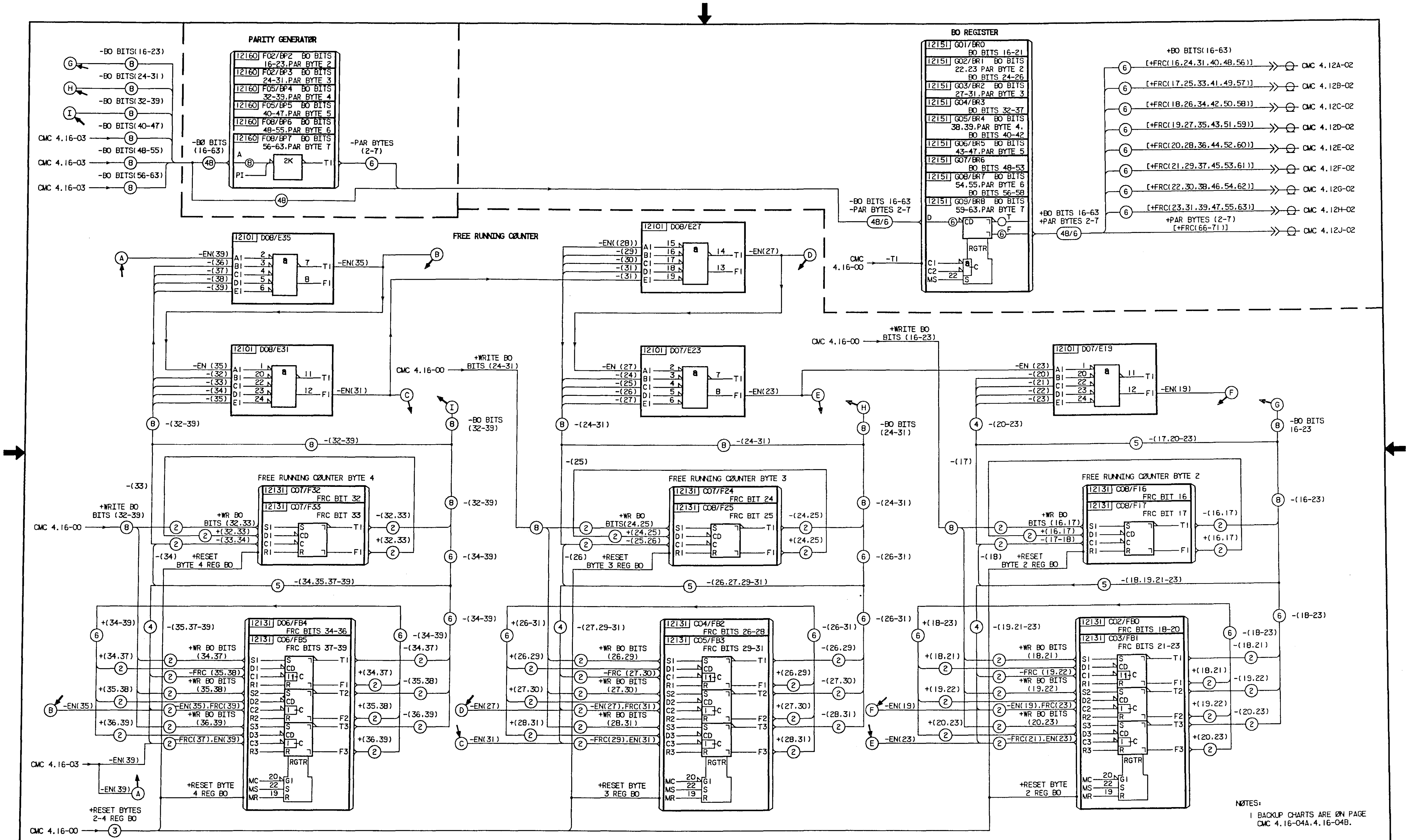
12131 LOC: D13 NAME: FB7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D11-14		T	S1	4	FRC BIT 45	7	T1	D14-16	4
D13-8		T	D1	6		8	F1	D13-6	1
D13-11	F14-22		C1	5					
			R1	3					
F7-15		T	S2	2	FRC BIT 46	11	T2	D13-5	4
D13-12		T	D2	24		12	F2	D13-24	1
D13-14	F14-23		C2	1					
			R2	23					
B11-14		T	S3	17	FRC BIT 47	14	T3	D13-1	4
D13-13		T	D3	15		13	F3	D13-15	1
F14-24		T	C3	16					
			R3	18					
			MC	20					
			MS	22					
E1-15	D14-19		MR	19					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.16-03
8DAH; A1B/3000 AD112-C

CODE IDENT 34010
D
DWG NO 60458190
REV J
SHEET CMC 4.16-03A
17-214


PARITY GENERATØR
12160 F02/BP2 BO BITS 16-23,PAR BYTE 2
12160 F02/BP3 BO BITS 24-31,PAR BYTE 3
12160 F05/BP4 BO BITS 32-39,PAR BYTE 4
12160 F05/BP5 BO BITS 40-47,PAR BYTE 5
12160 F08/BP6 BO BITS 48-55,PAR BYTE 6
12160 F08/BP7 BO BITS 56-63,PAR BYTE 7
2K
-BO BITS(16-23)
-BO BITS(24-31)
-BO BITS(32-39)
-BO BITS(40-47)
-BO BITS(48-55)
-BO BITS(56-63)
CMC 4.16-03
-BØ BITS (16-63)
-PAR BYTES (2-7)
BO REGISTER
12151 G01/BR0 BO BITS 16-21
12151 G02/BR1 BO BITS 22,23 PAR BYTE 2 BO BITS 24-26
12151 G03/BR2 BO BITS 27-31,PAR BYTE 3
12151 G04/BR3 BO BITS 32-37
12151 G05/BR4 BO BITS 38,39,PAR BYTE 4, BO BITS 40-42
12151 G06/BR5 BO BITS 43-47,PAR BYTE 5
12151 G07/BR6 BO BITS 48-53
12151 G08/BR7 BO BITS 54,55,PAR BYTE 6 BO BITS 56-58
12151 G09/BR8 BO BITS 59-63,PAR BYTE 7
RGTR
-BO BITS 16-63
-PAR BYTES 2-7
+BO BITS 16-63
+PAR BYTES 2-7
CMC 4.16-00 -TI
+BO BITS(16-63)
[+FRC(16,24,31,40,48,56)] CMC 4.12A-02
[+FRC(17,25,33,41,49,57)] CMC 4.12B-02
[+FRC(18,26,34,42,50,58)] CMC 4.12C-02
[+FRC(19,27,35,43,51,59)] CMC 4.12D-02
[+FRC(20,28,36,44,52,60)] CMC 4.12E-02
[+FRC(21,29,37,45,53,61)] CMC 4.12F-02
[+FRC(22,30,38,46,54,62)] CMC 4.12G-02
[+FRC(23,31,39,47,55,63)] CMC 4.12H-02
+PAR BYTES (2-7) [+FRC(66-71)] CMC 4.12J-02
FREE RUNNING CØUNTER
12101 D08/E35
12101 D08/E31
12101 D08/E27
12101 D07/E23
12101 D07/E19
-EN(35)
-EN(31)
-EN(27)
-EN(23)
-EN(19)
CMC 4.16-00 +WRITE BO BITS (24-31)
CMC 4.16-00 +WRITE BO BITS (16-23)
FREE RUNNING CØUNTER BYTE 4
12131 C07/F32 FRC BIT 32
12131 C07/F33 FRC BIT 33
12131 D06/FB4 FRC BITS 34-36
12131 C06/FB5 FRC BITS 37-39
FREE RUNNING CØUNTER BYTE 3
12131 C07/F24 FRC BIT 24
12131 C08/F25 FRC BIT 25
12131 C04/FB2 FRC BITS 26-28
12131 C05/FB3 FRC BITS 29-31
FREE RUNNING CØUNTER BYTE 2
12131 C08/F16 FRC BIT 16
12131 C08/F17 FRC BIT 17
12131 C02/FB0 FRC BITS 18-20
12131 C03/FB1 FRC BITS 21-23
CMC 4.16-00 +WRITE BO BITS (32-39)
+WR BO BITS (32,33)
+WR BO BITS(24,25)
+WR BO BITS (16,17)
+RESET BYTE 4 REG BO
+RESET BYTE 3 REG BO
+RESET BYTE 2 REG BO
CMC 4.16-03 -EN(39)
+RESET BYTES 2-4 REG BO
CMC 4.16-00

NØTES:

1 BACKUP CHARTS ARE ØN PAGE CMC 4.16-04A,4.16-04B.

CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM - CMC 3.15
PARITY GENERATØR, BO REGISTER, FREE
RUNNING CØUNTER.

8DAH;A1B/3000

AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CMC 4.16-04	17-215

12160 LOC: F02 NAME: BP2

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
C8-7	G1-2		A1	1	BIT 16	7	T1	G2-20	
C8-5	G1-1		A2	2	BIT 17				
C8-1	G1-20		A3	3	BIT 18				
C2-5	G1-19		A4	4	BIT 19				
D7-20	G1-18		A5	5	BIT 20				
G1-17		T	A6	22	BIT 21				
D7-23	G2-2		A7	23	BIT 22				
D7-24	G2-1		A8	24	BIT 23				
			P1	6					

12160 LOC: F02 NAME: BP3

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D7-3	G2-19		A1	13	BIT 24	11	T1	G3-17	
D7-4	G2-18		A2	14	BIT 25				
D7-5	G2-17		A3	15	BIT 26				
G3-2		T	A4	16	BIT 27				
D8-15	G3-1		A5	17	BIT 28				
D8-16	G3-20		A6	18	BIT 29				
D8-17	G3-19		A7	19	BIT 30				
D8-18	G3-18		A8	20	BIT 31				
			P1	12					

12160 LOC: F05 NAME: BP4

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
D8-20	G4-2		A1	1	BIT 32	7	T1	G5-20	
D8-22	G4-1		A2	2	BIT 33				
D8-23	G4-20		A3	3	BIT 34				
D8-24	G4-19		A4	4	BIT 35				
G4-18		T	A5	5	BIT 36				
D8-4	G4-17		A6	22	BIT 37				
D8-5	G5-2		A7	23	BIT 38				
D8-6	G5-1		A8	24	BIT 39				
			P1	6					

12160 LOC: F05 NAME: BP5

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F14-16	G5-19		A1	13	BIT 40	11	T1	G6-17	
G5-18		T	A2	14	BIT 41				
F11-16	G5-17		A3	15	BIT 42				
F14-19	G6-2		A4	16	BIT 43				
G6-1		T	A5	17	BIT 44				
G6-20		T	A6	18	BIT 45				
G6-19		T	A7	19	BIT 46				
G6-18		T	A8	20	BIT 47				
			P1	12					

12160 LOC: F08 NAME: BP6

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
F13-15	G7-2		A1	1	BIT 48	7	T1	G8-20	
F13-16	G7-1		A2	2	BIT 49				
F11-5	G7-20		A3	3	BIT 50				
F13-18	G7-19		A4	4	BIT 51				
F13-1	G7-18		A5	5	BIT 52				
G7-17		T	A6	22	BIT 53				
G8-2		T	A7	23	BIT 54				
G8-1		T	A8	24	BIT 55				
			P1	6					

12160 LOC: F08 NAME: BP7

SOURCE	DAISY CHAIN	T	V IP	R IP	IN BIT NAME	R OP	V OP	DEST	L
G8-19		T	A1	13	BIT 56	11	T1	G9-17	
G8-18		T	A2	14	BIT 57				
G8-17		T	A3	15	BIT 58				
G9-2		T	A4	16	BIT 59				
E8-1	G9-1		A5	17	BIT 60				
E8-20	G9-20		A6	18	BIT 61				
E8-22	G9-19		A7	19	BIT 62				
E8-23	G9-18		A8	20	BIT 63				
			P1	12					

12151 LOC: G01 NAME: BR0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F2-1		T	D1	2	BO	3	T1	TERM	
					BIT 16	4	F1	PIC-12	
F2-2		T	D2	1	BO	6	T2	TERM	
					BIT 17	5	F2	PIC-8	
F2-3		T	D3	20	BO	8	T3	TERM	
					BIT 18	7	F3	PIC-4	
F2-4		T	D4	19	BO	12	T4	TERM	
					BIT 19	11	F4	PIC-3	
F2-5		T	D5	18	BO	14	T5	TERM	
					BIT 20	13	F5	PIC-7	
D7-22	F2-22		D6	17	BO	16	T6	TERM	
					BIT 21	15	F6	PIC-11	
G2-24		T	C1	24					
			C2	23					
			MS	22					

12151 LOC: G02 NAME: BR1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F2-23		T	D1	2	BO	3	T1	TERM	
					BIT 22	4	F1	PIC-24	
F2-24		T	D2	1	BO	6	T2	TERM	
					BIT 23	5	F2	PIC-20	
F2-7		T	D3	20	PAR	8	T3	TERM	
					BYTE 2	7	F3	PIC-16	
F2-13		T	D4	19	BO	12	T4	TERM	
					BIT 24	11	F4	PIC-15	
F2-14		T	D5	18	BO	14	T5	TERM	
					BIT 25	13	F5	PIC-19	
F2-15		T	D6	17	BO	16	T6	TERM	
					BIT 26	15	F6	PIC-23	
E5-7	G1-24		C1	24					
			C2	23					
			MS	22					

12151 LOC: G03 NAME: BR2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D7-6	F2-16		D1	2	BO	3	T1	TERM	
					BIT 27	4	F1	PIC-36	
F2-17		T	D2	1	BO	6	T2	TERM	
					BIT 28	5	F2	PIC-32	
F2-18		T	D3	20	BO	8	T3	TERM	
					BIT 29	7	F3	PIC-78	
F2-19		T	D4	19	BO	12	T4	TERM	
					BIT 30	11	F4	PIC-27	
F2-20		T	D5	18	BO	14	T5	TERM	
					BIT 31	13	F5	PIC-31	
F2-11		T	D6	17	PAR	16	T6	TERM	
					BYTE 3	15	F6	PIC-35	
E5-8	G9-24		C1	24					
			C2	23					
			MS	22					

12151 LOC: G04 NAME: BR3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F5-1		T	D1	2	BO	3	T1	TERM	
					BIT 32	4	F1	PIC-48	
F5-2		T	D2	1	BO	6	T2	TERM	
					BIT 33	5	F2	PIC-43	
F5-3		T	D3	20	BO	8	T3	TERM	
					BIT 34	7	F3	PIC-39	
F5-4		T	D4	19	BO	12	T4	TERM	
					BIT 35	11	F4	PIC-40	
D8-3	F5-5		D5	18	BO	14	T5	TERM	
					BIT 36	13	F5	PIC-44	
F5-22		T	D6	17	BO	16	T6	TERM	
					BIT 37	15	F6	PIC-47	
G3-24		T	C1	24					
			C2	23					
			MS	22					

12151 LOC: G05 NAME: BR4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F5-23		T	D1	2	BO	3	T1	TERM	
					BIT 38	4	F1	PIC-59	
F5-24		T	D2	1	BO	6	T2	TERM	
					BIT 39	5	F2	PIC-56	
F5-7		T	D3	20	PAR	8	T3	TERM	
					BYTE 4	7	F3	PIC-52	
F5-13		T	D4	19	BO	12	T4	TERM	
					BIT 40	11	F4	PIC-51	
F14-17	F5-14		D5	18	BO	14	T5	TERM	
					BIT 41	13	F5	PIC-55	
F5-15		T	D6	17	BO	16	T6	TERM	
					BIT 42	15	F6	PIC-60	
G6-24		T	C1	24					
			C2	23					
			MS	22					

12151 LOC: G06 NAME: BR5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F5-16		T	D1	2	BO	3	T1	TERM	
					BIT 43	4	F1	PIC-75	
F14-01	F5-17		D2	1	BO	6	T2	TERM	
					BIT 44	5	F2	PIC-72	
F14-20	F5-18		D3	20	BO	8	T3	TERM	
					BIT 45	7	F3	PIC-67	
F14-22	F5-19		D4	19	BO	12	T4	TERM	
					BIT 46	11	F4	PIC-68	
F14-23	F5-20		D5	18	BO	14	T5	TERM	
					BIT 47	13	F5	PIC-71	
F5-11		T	D6	17	PAR	16	T6	TERM	
					BYTE 5	15	F6	PIC-76	
E5-11	G5-24		C1	24					
			C2	23					
			MS	22					

12151 LOC: G07 NAME: BR6

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F8-1		T	D1	2	BO	3	T1	TERM	
					BIT 48	4	F1	PIC-88	
F8-2		T	D2	1	BO	6	T2	TERM	
					BIT 49	5	F2	PIC-84	
F8-3		T	D3	20	BO	8	T3	TERM	
					BIT 50	7	F3	PIC-80	
F8-4		T	D4	19	BO	12	T4	TERM	
					BIT 51	11	F4	PIC-79	
F8-5		T	D5	18	BO	14	T5	TERM	
					BIT 52	13	F5	PIC-83	
F13-20	F8-22		D6	17	BO	16	T6	TERM	
					BIT 53	15	F6	PIC-87	
E5-12	G8-24		C1	24					
			C2	23					
			MS	22					

12151 LOC: G08 NAME: BR7

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F13-22	F8-23		D1	2	BO	3	T1	TERM	
					BIT 54	4	F1	PIC-105	
E13-23	F8-24		D2	1	BO	6	T2	TERM	
					BIT 55	5	F2	PIC-101	
F8-7		T	D3	20	PAR	8	T3	TERM	
					BYTE 6	7	F3	PIC-97	
F13-3	F8-13		D4	19	BO	12	T4	TERM	
					BIT 56	11	F4	PIC-92	
F13-4	F8-14		D5	18	BO	14	T5	TERM	
					BIT 57	13	F5	PIC-98	
F12-1	F8-15		D6	17	BO	16	T6	TERM	
					BIT 58	15	F6	PIC-102	
G7-24		T	C1	24					
			C2	23					
			MS	22					

12151 LOC: G09 NAME: BR8

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
F13-6	F8-16		D1	2	BO	3	T1	TERM	
					BIT 59	4	F1	PIC-122	
F8-17		T	D2	1	BO	6	T2	TERM	
					BIT 60	5	F2	PIC-118	
F8-18		T	D3	20	BO	8	T3	TERM	
					BIT 61	7	F3	PIC-113	
F8-19		T	D4	19	BO	12	T4	TERM	
					BIT 62	11	F4	PIC-110	
F8-20		T	D5	18	BO	14	T5	TERM	
					BIT 63	13	F5	PIC-114	
F8-11		T	D6	17	PAR	16	T6	TERM	
					BYTE 7	15	F6	PIC-125	
E5-18		T	C1	24					
			C2	23					
			MS	22					

12131 LOC: C07 NAME: F32

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D10-07		T	S1	4	FRC BIT 32	7	T1	D8-20	3
C7-8		T	D1	6		8	F1	C7-6	1
C7-11	D8-22		C1	5					
C7-23		T	R1	3					

12131 LOC: C07 NAME: F33

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D10-6		T	S1	2	FRC BIT 33	11	T1	C7-5	4
C7-12		T	D1	24		12	F1	C7-24	1
D6-7	D8-23		C1	1					
E1-13	C7-3		R1	23					

12131 LOC: C07 NAME: F24

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C9-7		T	S1	17	FRC BIT 24	14	T1	D7-3	3
C7-13		T	D1	15		13	F1	C7-15	1
C8-14	D7-4		C1	16					
E1-6	C8-18		R1	18					

12131 LOC: C08 NAME: F25

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C9-6		T	S1	17	FRC BIT 25	14	T1	C7-16	4
C8-13		T	D1	15		13	F1	C8-15	1
C4-7	D7-5		C1	16					
C7-18		T	R1	18					

12131 LOC: C08 NAME: F16

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D9-7		T	S1	4	FRC BIT 16	7	T1	F2-1	2
C8-8		T	D1	6		8	P1	C8-6	1
C8-11	F2-2		C1	5					
C8-23		T	R1	3					

12131 LOC: C08 NAME: F17

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D9-6		T	S1	2	FRC BIT 17	11	T1	C8-5	3
C8-12		T	D1	24		12	F1	C8-24	1
C2-7	F2-3		C1	1					
E1-3	C8-3		R1	23					

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
CMC 4.16-04
8DAH; A1B/3600 AD112 – C

CODE IDENT	SIZE	DWG NO	REV
34010	D	60458190	J
		SHEET CMC 4.16-04A	17 – 216

12131 LOC: D06 NAME: FB4

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D10-15		T	S1	4	FRC BIT 34	7	T1	C7-1	4
D6-8		T	D1	6		8	F1	D6-6	1
D6-11	D8-24		C1	5					
			R1	3					
D10-14		T	S2	2	FRC BIT 35	11	T2	D6-5	4
D6-12		T	D2	24		12	F2	D6-24	1
D8-1		T	C2	1					
			R2	23					
D10-11		T	S3	17	FRC BIT 36	14	T3	D8-3	3
D6-13		T	D3	15		13	F3	D6-15	1
C6-7	D8-4		C3	16					
			R3	18					
			MC	20					
			MS	22					
C6-19		T	MR	19					

12131 LOC: C06 NAME: FB5

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D11-15		T	S1	4	FRC BIT 37	7	T1	D6-16	4
C6-8		T	D1	6		8	F1	C6-6	1
C6-11	D8-5		C1	5					
			R1	3					
D12-14		T	S2	2	FRC BIT 38	11	T2	C6-5	4
C6-12		T	D2	24		12	F2	C6-24	1
C6-14	D8-6		C2	1					
			R2	23					
B11-15		T	S3	17	FRC BIT 39	14	T3	C6-1	4
C6-13		T	D3	15		13	F3	C6-15	1
D8-2		T	C3	16					
			R3	18					
			MC	20					
			MS	22					
E1-14	D6-19		MR	19					

12131 LOC: C04 NAME: FB2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
C9-15		T	S1	4	FRC BIT 26	7	T1	C8-16	4
C4-8		T	D1	6		8	F1	C4-6	1
C4-11	D7-6		C1	5					
			R1	3					
C9-14		T	S2	2	FRC BIT 27	11	T2	C4-5	4
C4-12		T	D2	24		12	F2	C4-24	1
D7-2		T	C2	1					
			R2	23					
C9-11		T	S3	17	FRC BIT 28	14	T3	D8-15	3
C4-13		T	D3	15		13	F3	C4-15	1
C5-7	D8-16		C3	16					
			R3	18					
			MC	20					
			MS	22					
E1-5	C5-19		MR	19					

12131 LOC: C05 NAME: FB3

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D11-6		T	S1	4	FRC BIT 29	7	T1	C4-16	4
C5-8		T	D1	6		8	F1	C5-6	1
C5-11	D8-17		C1	5					
			R1	3					
D12-15		T	S2	2	FRC BIT 30	11	T2	C5-5	4
C5-12		T	D2	24		12	F2	C5-24	1
C5-14	D8-18		C2	1					
			R2	23					
B11-6		T	S3	17	FRC BIT 31	14	T3	C5-1	4
C5-13		T	D3	15		13	F3	C5-15	1
D8-19		T	C3	16					
			R3	18					
			MC	20					
			MS	22					
C4-19		T	MR	19					

12131 LOC: C02 NAME: FB0

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D9-15		T	S1	4	FRC BIT 18	7	T1	C8-1	2
C2-8		T	D1	6		8	F1	C2-6	1
C2-11	F2-4		C1	5					
			R1	3					
D9-14		T	S2	2	FRC BIT 19	11	T2	C2-5	3
C2-12		T	D2	24		12	F2	C2-24	1
D7-11		T	C2	1					
			R2	23					
D9-11		T	S3	17	FRC BIT 20	14	T3	D7-20	3
C2-13		T	D3	15		13	F3	C2-15	1
C3-7	D7-22		C3	16					
			R3	18					
			MC	20					
			MS	22					
E1-4	C3-19		MR	19					

12131 LOC: C03 NAME: FB1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
D11-7		T	S1	4	FRC BIT 21	7	T1	C2-16	4
C3-8		T	D1	6		8	F1	C3-6	1
C3-11	D7-23		C1	5					
			R1	3					
D12-6		T	S2	2	FRC BIT 22	11	T2	C3-5	4
C3-12		T	D2	24		12	F2	C3-24	1
C3-14	D7-24		C2	1					
			R2	23					
B11-7		T	S3	17	FRC BIT 23	14	T3	C3-1	4
C3-13		T	D3	15		13	F3	C3-15	1
D7-1		T	C3	16					
			R3	18					
			MC	20					
			MS	22					
C2-19		T	MR	19					

NOTES: 1. LOGIC ON CMC 4.16-04

12151 LOC: G10 NAME: MC1

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-158		T	D1	2	MASTER CLEAR (T1)	3	T1	G10-1	
						4	F1	F9-2	
G10-3		T	D2	1	T2	6	T2	G10-20	
						5	F2	TERM	
G10-6		T	D3	20	T3	8	T3	G10-19	
						7	F3	TERM	
G10-8		T	D4	19	T4	12	T4	G10-18	
						11	F4	TERM	
G10-12		T	D5	18	T5	14	T5	G10-17	
						13	F5	TERM	
G10-14		T	D6	17	T6	16	T6	G11-2	
						15	F6	TERM	
E6-11	G11-24		C1	24					
			C2	23					
			MS	22					

12151 LOC: G11 NAME: MC2

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G10-16		T	D1	2	MASTER CLEAR (T7)	3	T1	G11-1	
						4	F1	TERM	
G11-3		T	D2	1	T8	6	T2	G11-20	
						5	F2	TERM	
G11-6		T	D3	20	T9	8	T3	G11-19	
						7	F3	TERM	
G11-8		T	D4	19	T10	12	T4	G11-18	
						11	F4	TERM	
G11-12		T	D5	18	T11	14	T5	G11-17	
						13	F5	TERM	
G11-14		T	D6	17	T12	16	T6	G12-2	
						15	F6	TERM	
G10-24		T	C1	24					
			C2	23					
			MS	22					

12151 LOC: G12 NAME: MC3

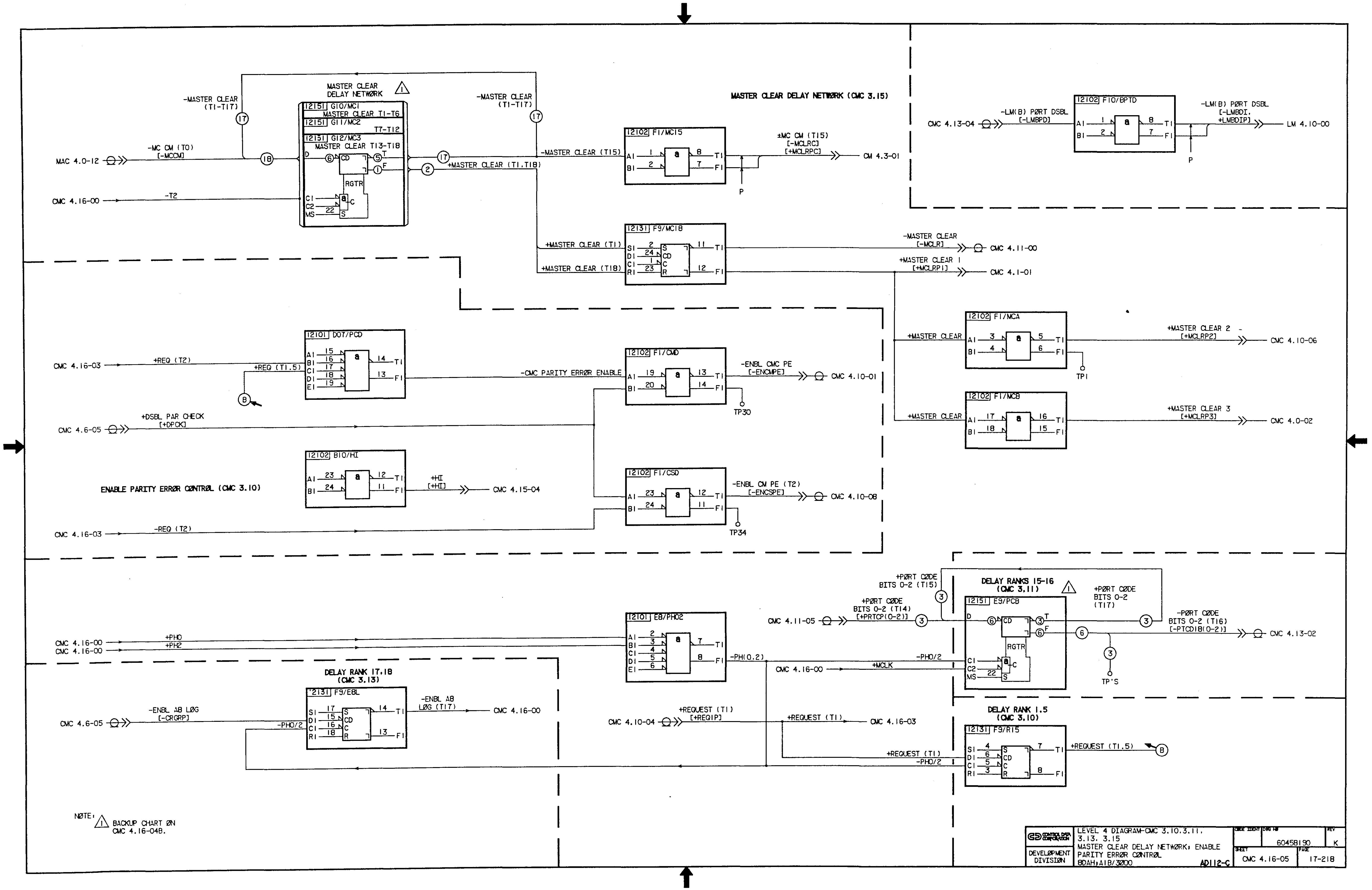
SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
G11-16		T	D1	2	MASTER CLEAR (T13)	3	T1	G12-1	
						4	F1	TERM	
G12-3		T	D2	1	T14	6	T2	G12-20	
						5	F2	TERM	
G12-6		T	D3	20	T15	8	T3	G12-19	
						7	F3	TERM	
G12-8	F1-1		D4	19	T16	12	T4	G12-18	
						11	F4	TERM	
G12-12		T	D5	18	T17	14	T5	G12-17	
						13	F5	TERM	
G12-14		T	D6	17	T18	16	T6	TERM	
						15	F6	F9-23	
E6-12		T	C1	24					
			C2	23					
			MS	22					

12151 LOC: E9 NAME: PCB

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
PIC-126		T	D1	2	PORT CD BIT 0 (T17)	3	T1	E9-19	
						4	F1	TP-28	
PIC-129		T	D2	1	PORT CD BIT 1 (T17)	6	T2	E9-18	
						5	F2	TP-27	
PIC-130		T	D3	20	PORT CD BIT 2 (T17)	8	T3	E9-17	
						7	F3	TP-23	
E9-3		T	D4	19	PORT CD BIT 0 (T18)	12	T4	TERM	
						11	F4	PIC-106	
E9-6		T	D5	18	PORT CD BIT 1 (T18)	14	T5	TERM	
						13	F5	PIC-117	
E9-8		T	D6	17	PORT CD BIT 2 (T18)	16	T6	TERM	
						15	F6	PIC-121	
E8-8		T	C1	24					
E5-1		T	C2	23					
			MS	22					

NOTES: 1. LOGIC ON CMC 4.16-05

CONTROL DATA CORPORATION ARDEN HILLS OPERATIONS	LEVEL 4 BACKUP CHART SUPPLEMENTAL WIRING INFORMATION CMC 4.16-04, 4.16-05 8DAH; AIB/3000 AD112-C	CODE IDENT 34010	D	DWG NO 60458190 SHEET CMC 4.16-04B	REV J 17-217



CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CMC 3.10.3.11,
3.13, 3.15
MASTER CLEAR DELAY NETWORK; ENABLE
PARITY ERROR CONTROL
8DAH;A1B/3000 AD112-C

CODE IDENT	DWG NO	REV
	60458190	K

SHEET	PAGE
CMC 4.16-05	17-218

LEFT ZIF △1

BIT NAME	I/O	SHEET CMC 4.16-	TYPE	VIRTUAL PIN	REAL PIN
WRNBO(2)	I	00	Z	002	P2A-19
(3)				03	20
(4)				04	17
(5)				05	15
(6)				06	16
WRNBO(7)		00		07	14
BDS21(40)		01		10	11
(41)				11	12
(42)				12	09
(43)				13	10
(44)				14	07
(45)				15	05
(46)				16	06
(47)				17	04
(32)				18	21
(33)				19	22
(34)				1A	24
(35)				1B	25
(36)				1C	26
(37)				1D	27
(38)				1E	29
BDS21(39)				1F	P2A-30
ADRSMP(2)				20	P1A-01
(3)				21	02
(4)				22	04
(5)				23	05
(6)				24	06
(7)				25	07
(8)				26	09
(9)				27	10
(10)				28	11
(11)				29	12
(12)				2A	14
(13)				2B	15
(14)				2C	16
(15)				2D	17
(16)				2E	19
(17)				2F	20
(18)				30	21
(19)				31	22
(20)				32	24
(21)				33	25
(22)				34	26
(23)				35	27
(24)				36	29
(25)				37	30
(26)				38	31
(27)				39	32
(28)				3A	34
(32)				3B	35
(33)				3C	36
(34)				3D	37
ADRSMP(35)	I	01	Z	3E	P1A-39
MCLRC	O	05	D	B8	P2A-39
MCLRPC			D	B9	40
MCLRP1			Z	BB	01
MCLRP2				BC	P2A-02
MCLRP3	O	05	Z	0BD	P1A-40
					P2A-31

ZIF GROUND PINS			
P1A-03	P1A-23	P2A-03	P2A-23
P1A-08	P1A-28	P2A-08	P2A-28
P1A-13	P1A-33	P2A-13	P2A-33
P1A-18	P1A-38	P2A-18	P2A-38

COAX △1

BIT NAME	I/O	SHEET CMC 4.16-	TYPE	VIRTUAL PIN	REAL PIN
CLKPM(1)	I	00	C	000	P1C-63
NCLKN(388)		00		01	91
BDS21(0)		03		4F	178
(1)				50	177
(2)				51	182
BDS21(3)		03		52	181
MCCM		05		58	158
PRTCDP(0)				59	126
(1)				5A	129
PRTCDP(2)	I	05		5B	130
FRC(16)	O	04		82	12
(17)				83	08
(18)				84	04
(19)				85	03
(20)				86	07
(21)				87	11
(22)				88	24
(23)				89	20
(24)				8A	15
(25)				8B	19
(26)				8C	23
(27)				8D	36
(28)				8E	32
(29)				8F	28
(30)				90	27
(31)				91	31
(32)				92	48
(33)				93	43
(34)				94	39
(35)				95	40
(36)				96	44
(37)				97	47
(38)				98	59
(39)				99	56
(40)				9A	51
(41)				9B	55
(42)				9C	60
(43)				9D	75
(44)				9E	72
(45)				9F	67
(46)				A0	68
(47)				A1	71
(48)				A2	88
(49)				A3	84
(50)				A4	80
(51)				A5	79
(52)				A6	83
(53)				A7	87
(54)				A8	105
(55)				A9	101
(56)				AA	92
(57)				AB	98
(58)				AC	102
(59)				AD	122
(60)				AE	118
(61)				AF	113
(62)				B0	110
(63)				B1	114
(66)				B2	16
(67)				B3	35
(68)				B4	52
(69)				B5	76
(70)				B6	97
FRC(71)		04		B7	125
MCLR		05		BA	109
PTCD18(0)				BE	106
(1)				BF	117
PTCD18(2)		05		C0	121
PTCDPO	O	00		CE	134
REQIP	I	05		5D	173
DPCK	I			5E	138
ENCMPE	O			D1	137
ENCSPE	O			D2	141
CRGRP	I			0D3	P1C-174
LMBPD	I	05	C	0D4	P1C-133

RIGHT ZIF △1

BIT NAME	I/O	SHEET CMC 4.16-	TYPE	VIRTUAL PIN	REAL PIN
MACWRT(0)	I	00	Z	008	P1B-21
(1)				09	22
(2)				0A	24
(3)				0B	25
(4)				0C	26
(5)				0D	27
(6)				0E	29
MACWRT(7)		00		0F	30
BDS21(48)		01		3F	01
(49)				40	02
(50)				41	04
(51)				42	05
(52)				43	06
(53)				44	07
(54)				45	09
(55)				46	10
(56)				47	11
(57)				48	12
(58)				49	14
(59)				4A	15
(60)				4B	16
(61)				4C	17
(62)				4D	19
BDS21(63)		01		4E	P1B-20
PTCD(0)		03		53	P2B-10
(1)				54	11
PTCD(2)				55	12
INCFRC				56	01
CBCAO1	I			57	39
CBDFLT	O			80	29
ADRSO1		03		81	40
CAPE(0)		01		C1	31
(1)				C2	32
(2)				C3	34
CAPE(3)		01		C4	P2B-35
MCWRTB(0)		00		C5	P1B-31
(1)				C6	32
(2)				C7	34
(3)				C8	35
(4)				C9	36
(5)				CA	37
(6)				CB	39
MCWRTB(7)	O	00		CC	P1B-40
WRTBO	I	03		5C	P2B-04
HI	O	05		0CD	P2B-37
LMBDI	O	05		0CE	P2B-15
LMBDIP	O	05	Z	0CF	P2B-16

ZIF GROUND PINS			
P1B-03	P1B-23	P2B-03	P2B-23
P1B-08	P1B-28	P2B-08	P2B-28
P1B-13	P1B-33	P2B-13	P2B-33
P1B-18	P1B-38	P2B-18	P2B-38

NOTE:

△1 CONNECTOR TYPES:

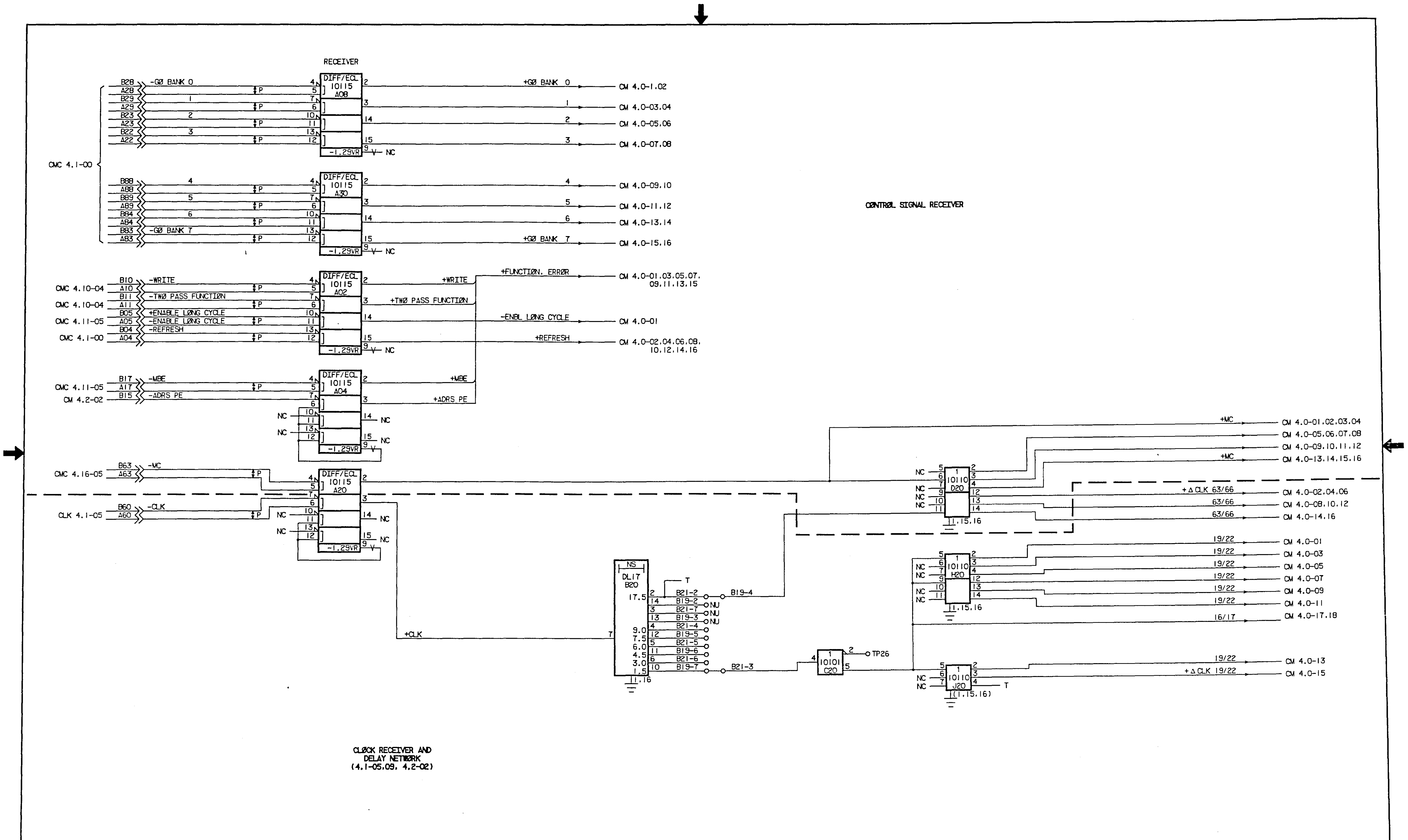
C = COAX
D = DIFFERENTIAL
Z = ZIF TO FOIL ON INTERCONNECT BOARD

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 CONNECTOR CHART
SUPPLEMENTAL WIRING INFORMATION
80AH;A1B/3000
AD112-C

CAGE IDENT	DWG NO	REV
	60458190	K

SHEET	PAGE
CMC 4.16-CC	17-219



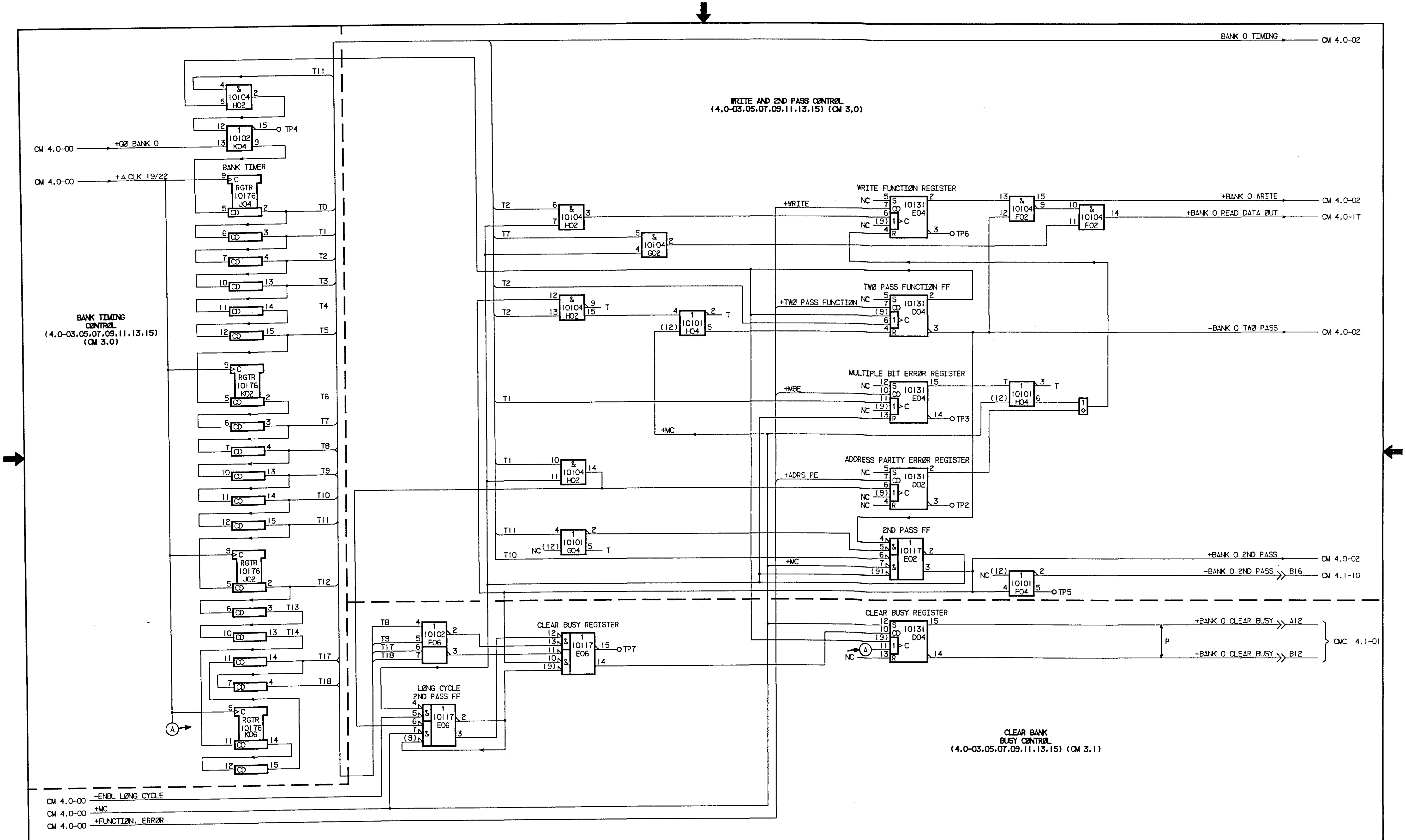
CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM
CM BANKS 0-7 CONTROL
CONTROL SIGNAL RECEIVER, CLOCK
RECEIVER AND DELAY NETWORK
3GSH,A13

AD112-C

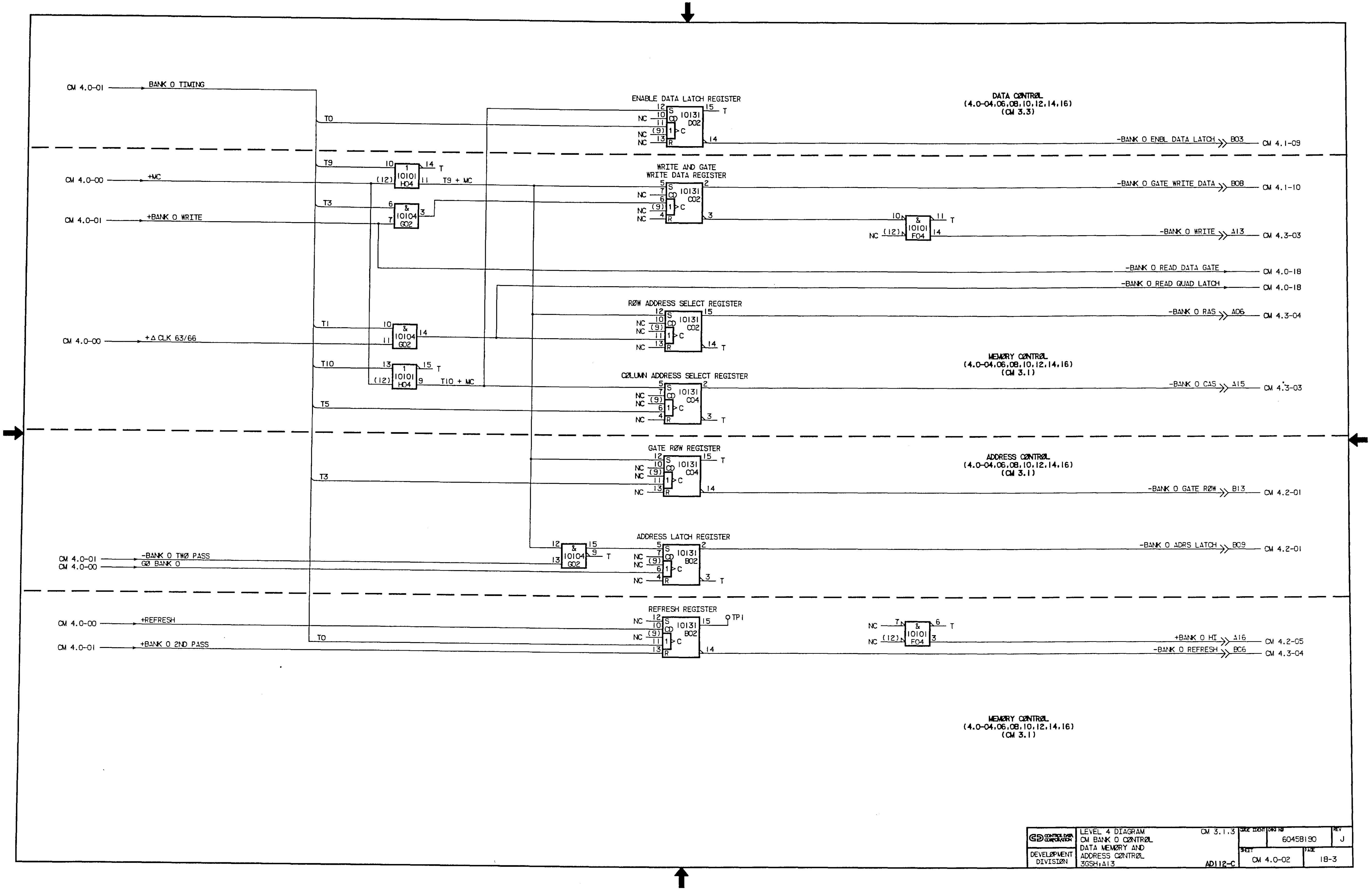
CODE IDENT	DWG NO	REV
	60458190	J
SHEET CM 4.0-00	PAGE 18-1	



CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM CM 3.0.1
CM BANK 0 CONTROL
BANK TIMING, WRITE AND 2ND
PASS AND CLEAR BANK BUSY CONTROL
3GSH,A13 AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CM 4.0-01
PAGE 18-2



CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM
CM BANK 0 CØNTRØL
DATA MEMØRY AND
ADDRESS CØNTRØL
3GSH, A13

CM 3.1.3

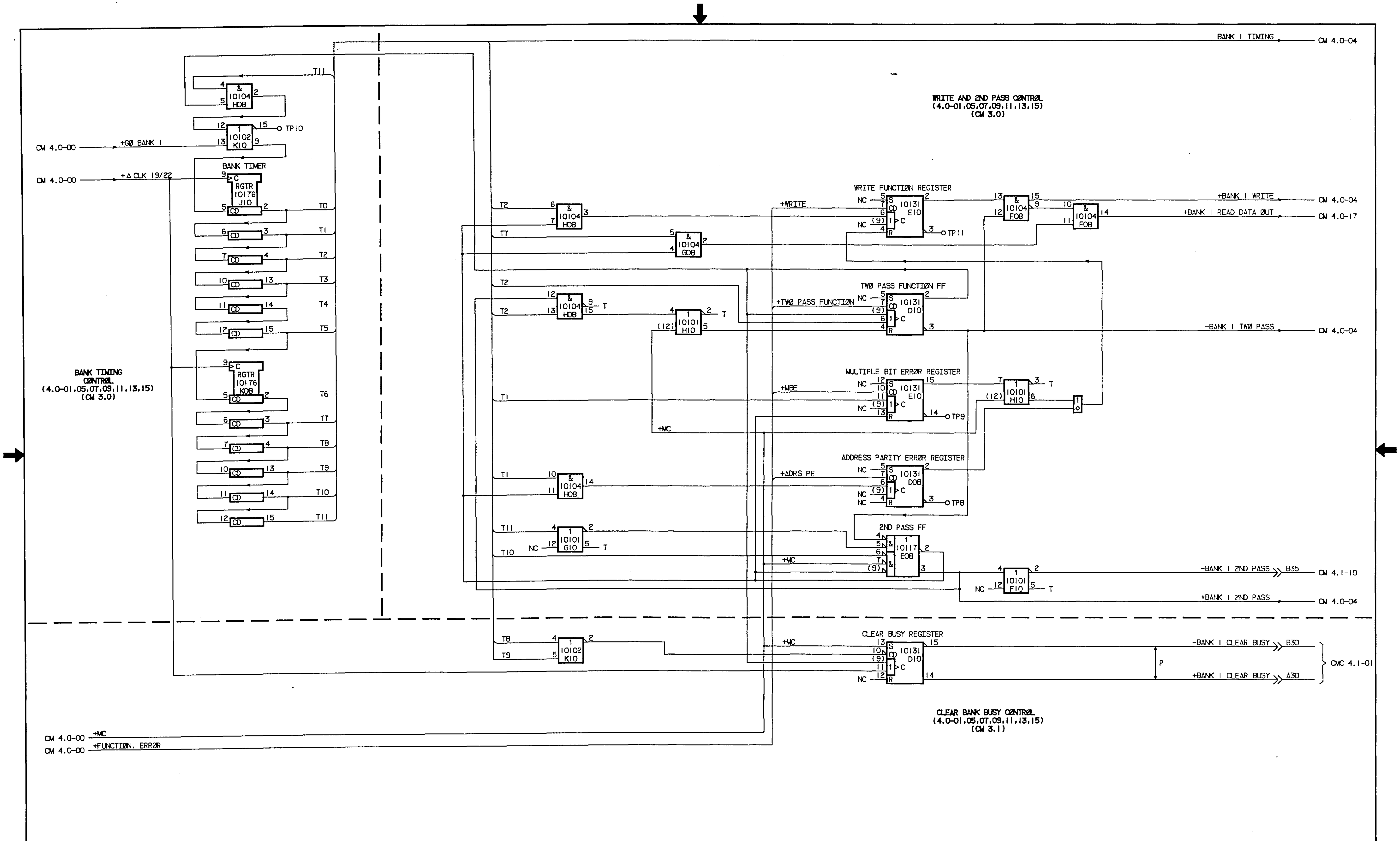
AD112-C

60458190

REV J

SHEET CM 4.0-02

PAGE 18-3



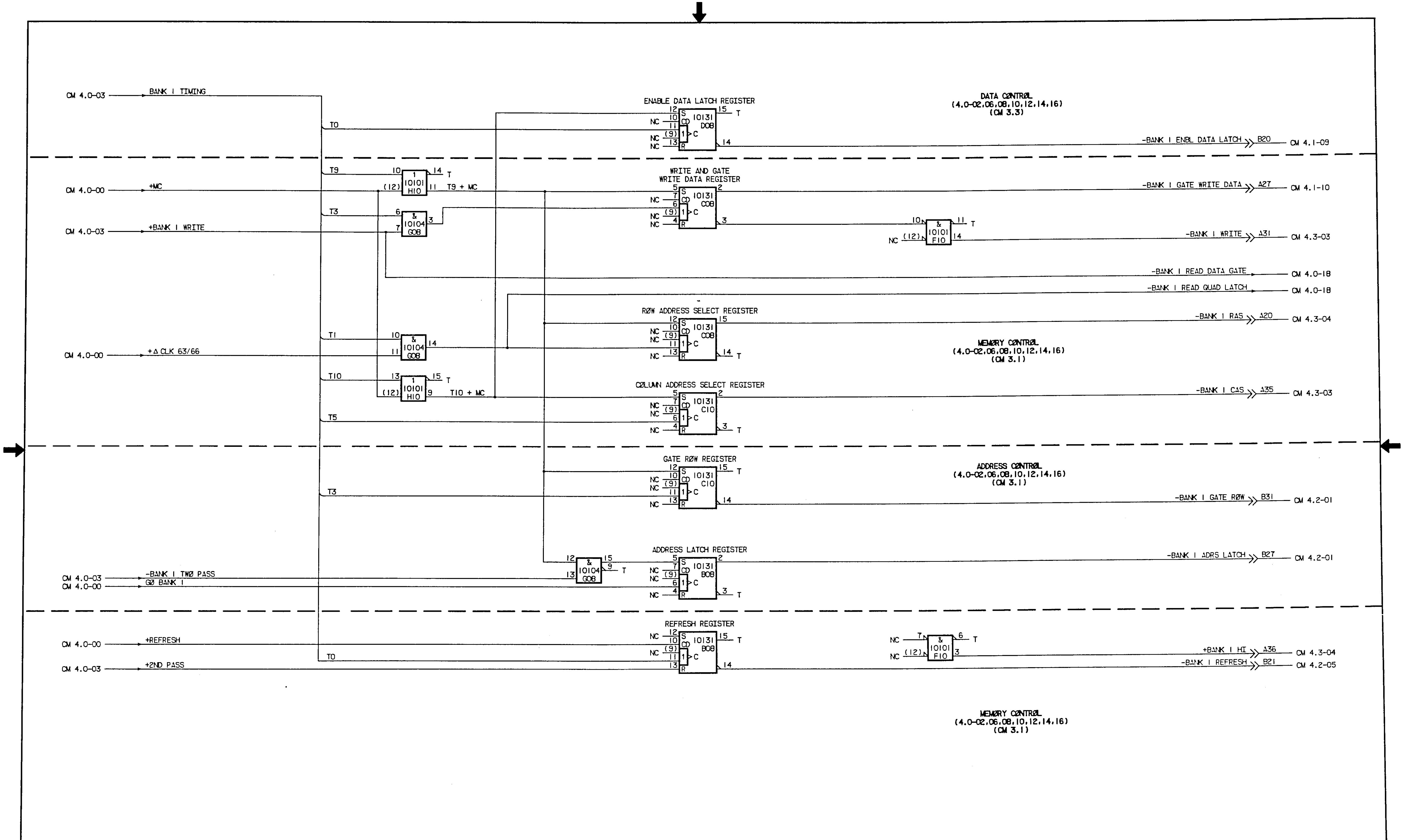
CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM CM 3.0.1
CM BANK 1 CONTROL
BANK TIMING, WRITE AND
2ND PASS AND CLEAR BANK BUSY CONTROL
3GSH:A13 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.0-03	18-4



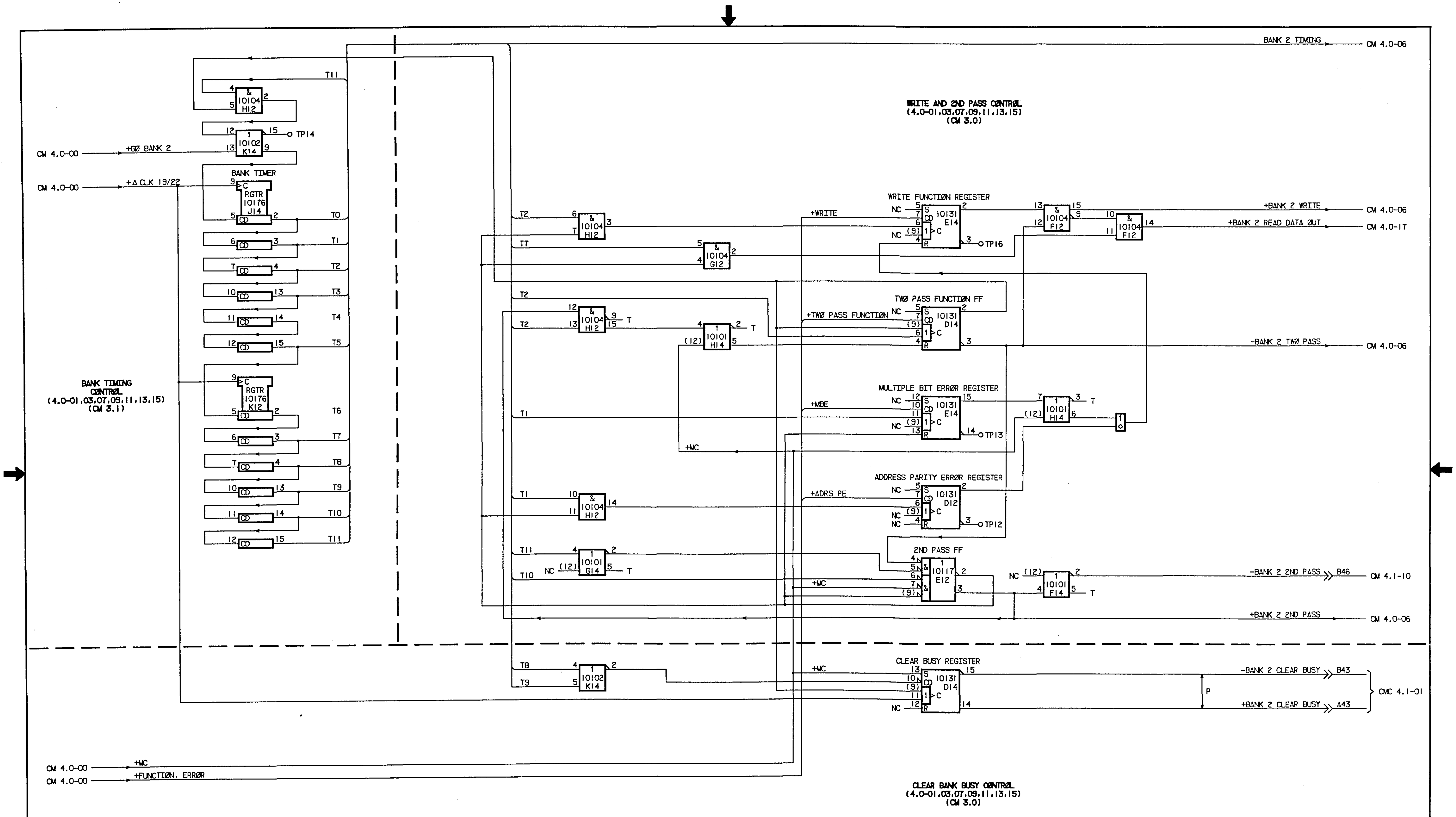
CONTROL DATA CORPORATION
DEVELOPMENT DIVISION:

LEVEL 4 DIAGRAM
CM BANK 1 CONTROL
DATA, MEMORY AND
ADDRESS CONTROL
3GSH,A13

CM 3.1.3
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.0-04	18-5

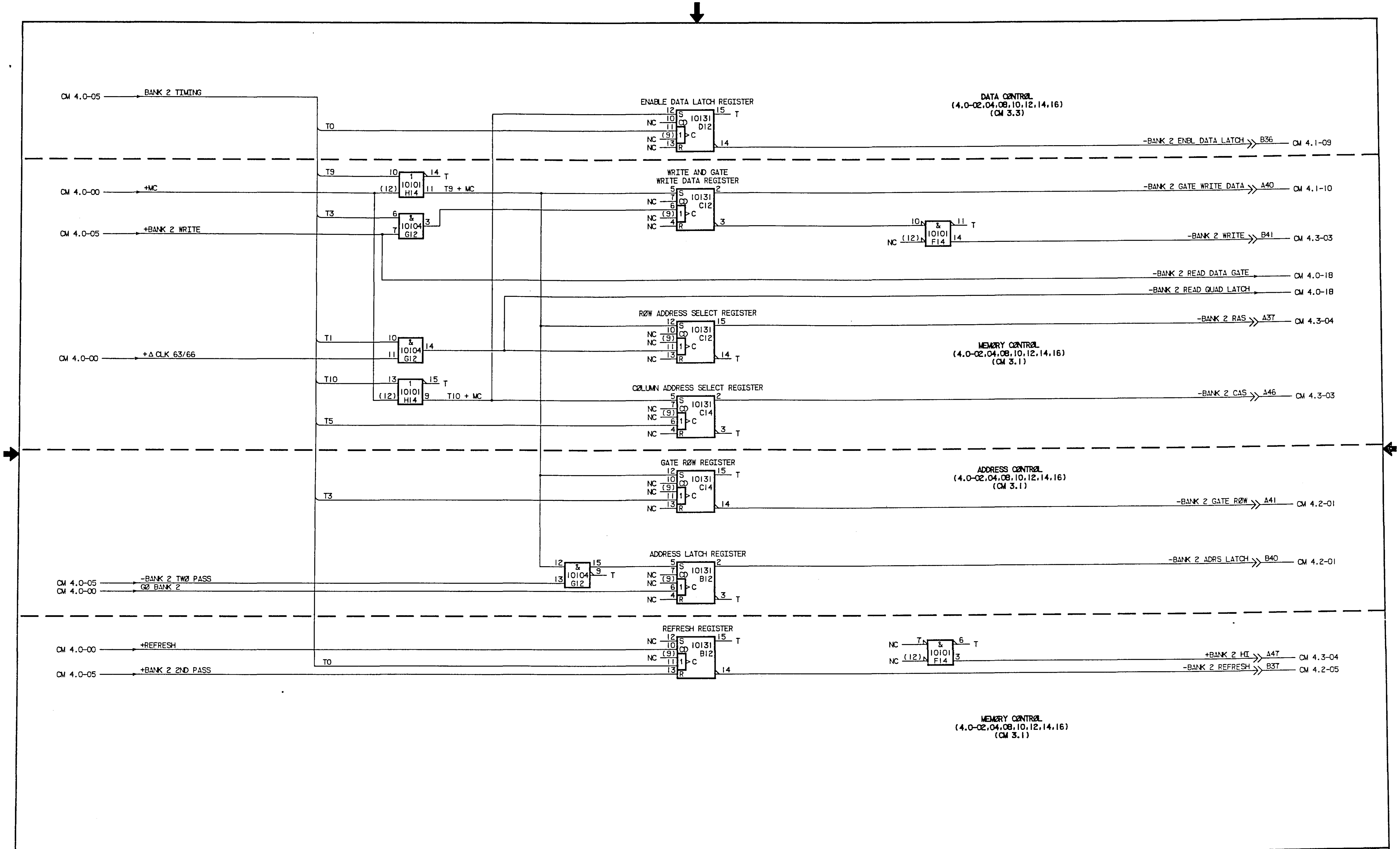


CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM CM 3.0.1
CM BANK 2 CONTROL
BANK TIMING, WRITE AND 2ND
PASS AND CLEAR BANK BUSY CONTROL
3GSH,A13 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.0-05	18-6



CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

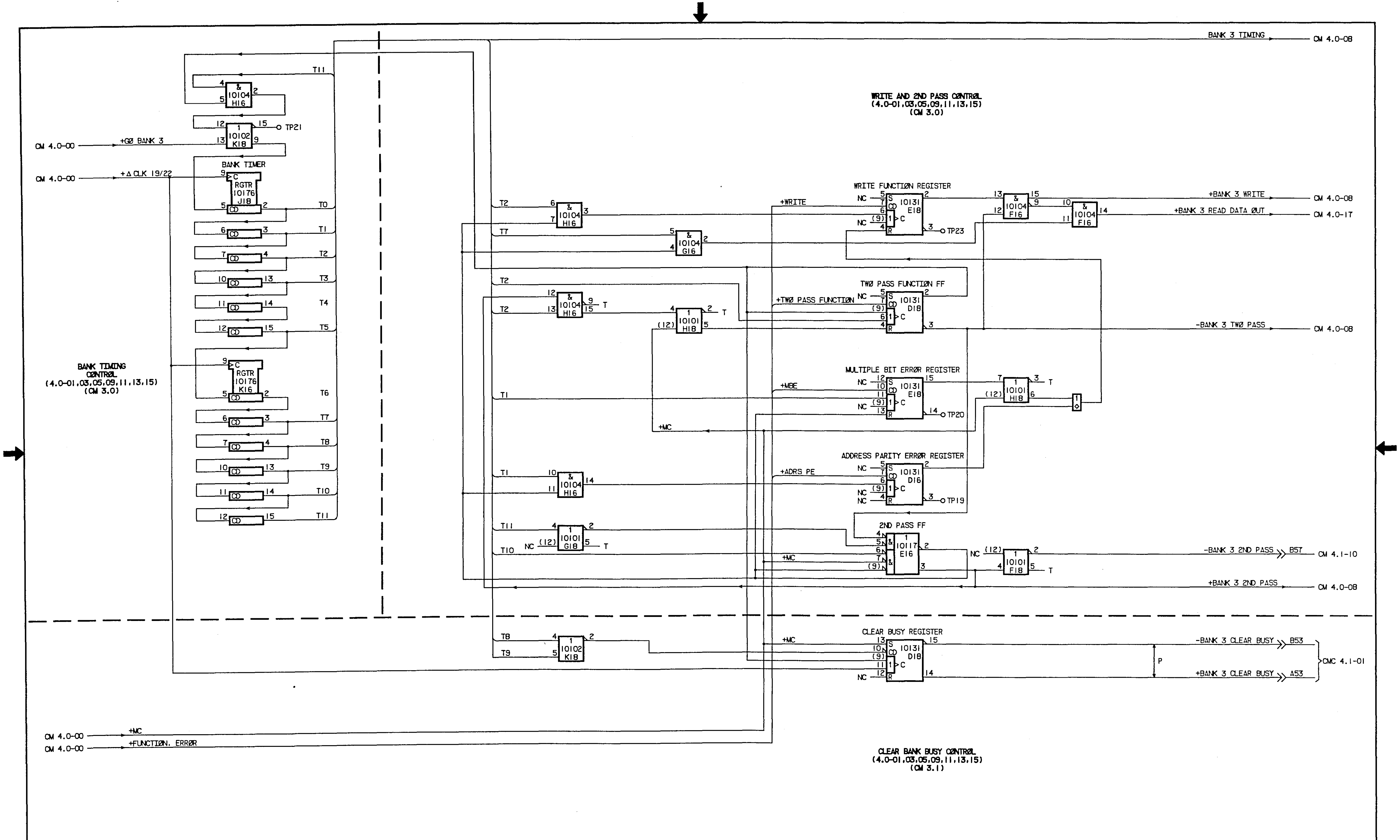
LEVEL 4 DIAGRAM
CM BANK 2 CONTROL
DATA, MEMORY AND
ADDRESS CONTROL
3GSH;A13

CM 3.1.3

AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.0-06	18-7



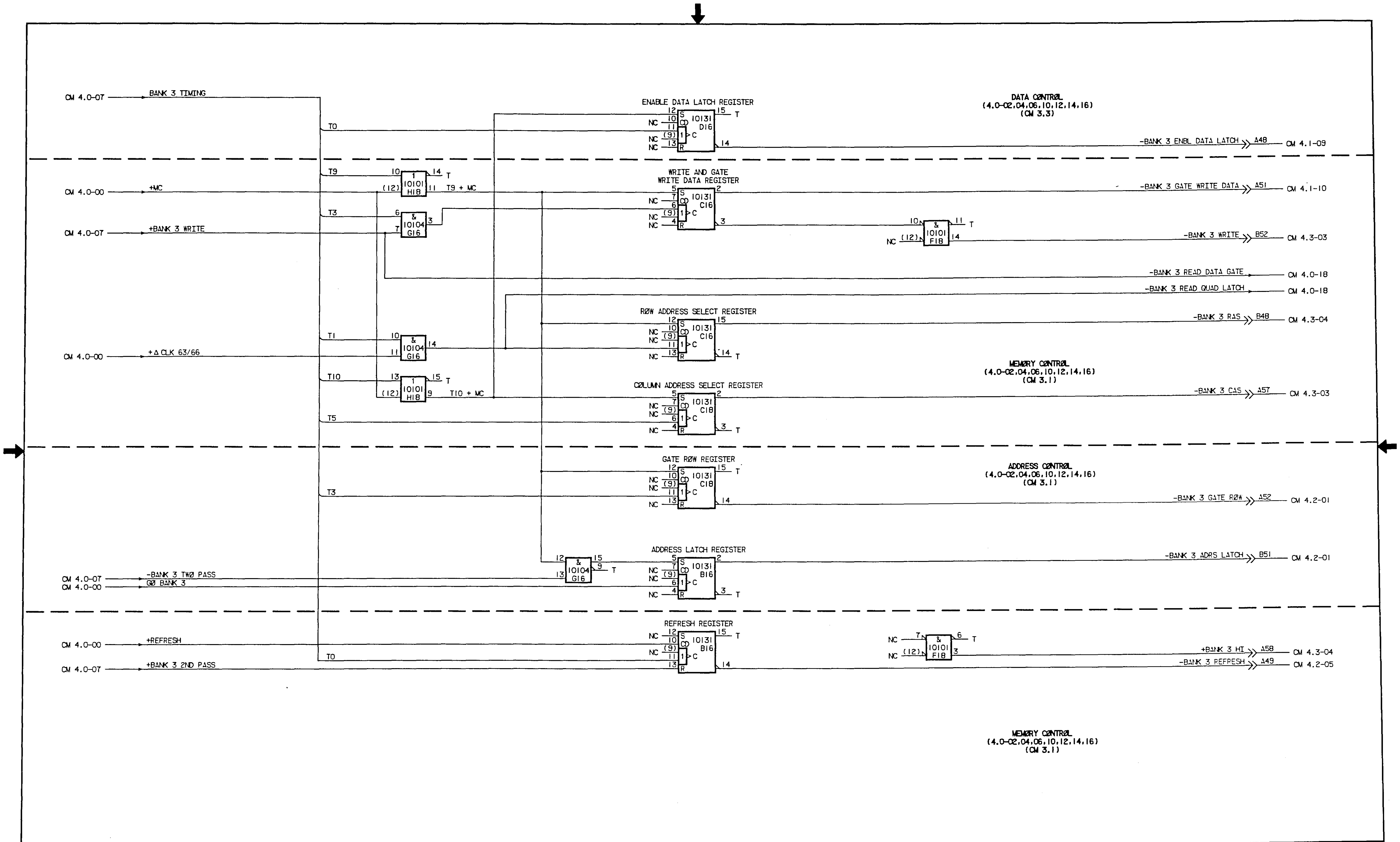
CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM CM 3.0.1
CM BANK 3 CONTROL
BANK TIMING. WRITE AND 2ND
PASS AND CLEAR BANK BUSY CONTROL
3GSH,A13 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.0-07	18-8



CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM
CM BANK 3 CONTROL
DATA, MEMORY AND
ADDRESS CONTROL
3GSH,A13

CM 3.1.3

AD112-C

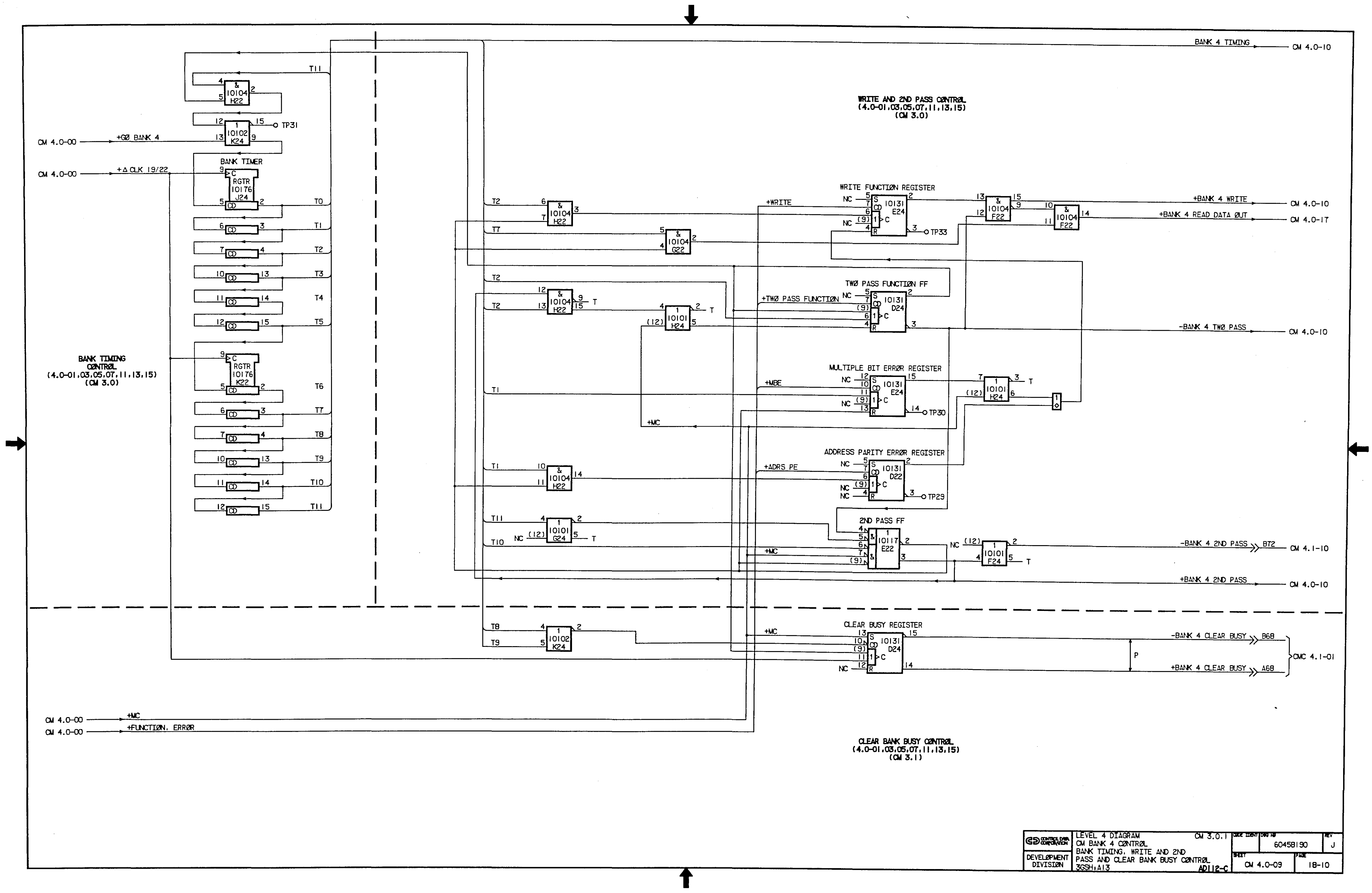
CODE IDENT

DWG NO 60458190

REV J

SHEET CM 4.0-08

PAGE 18-9

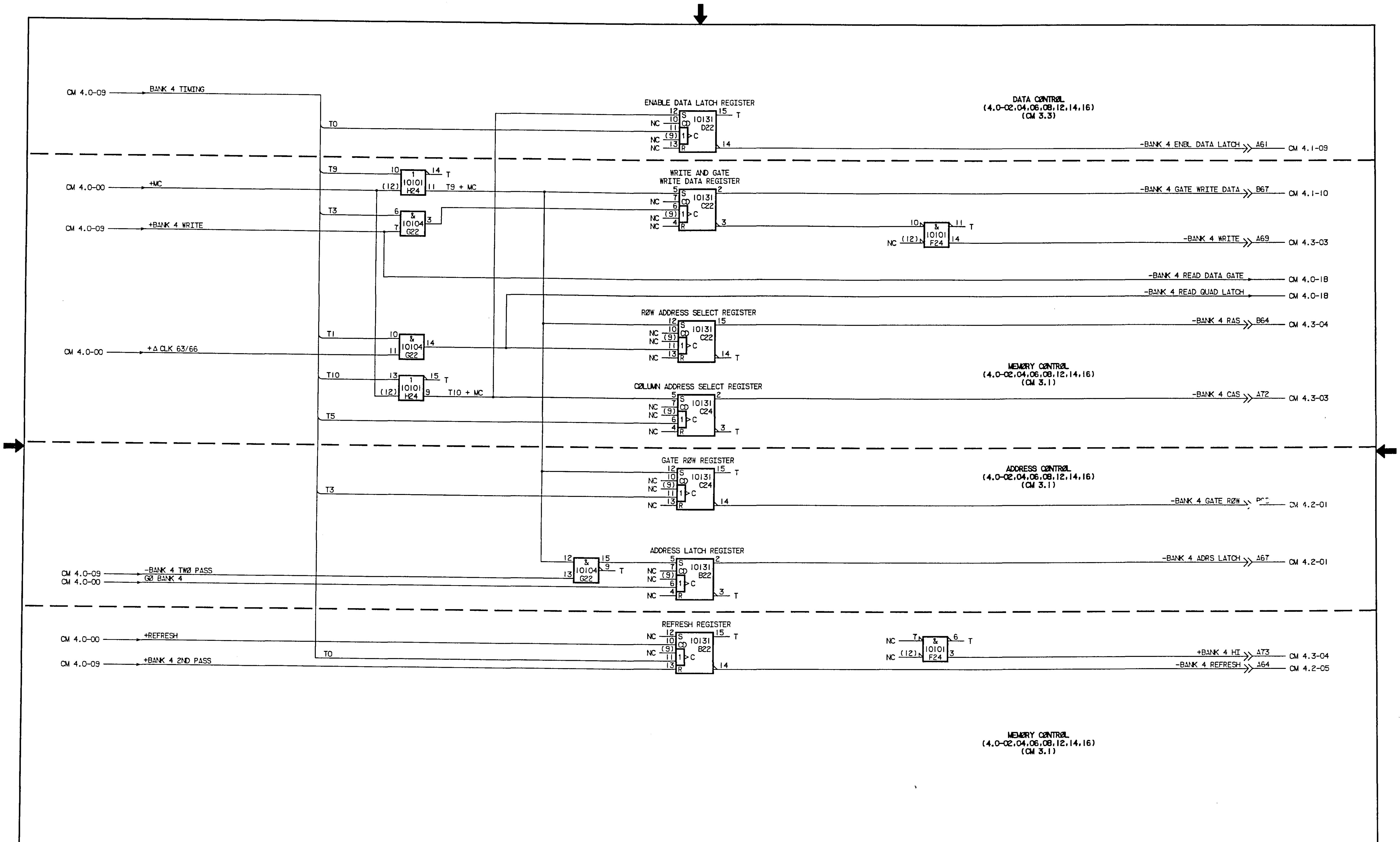


CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM CM 3.0.1
CM BANK 4 CONTROL
BANK TIMING, WRITE AND 2ND
PASS AND CLEAR BANK BUSY CONTROL
3GSH,A13 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.0-09	18-10



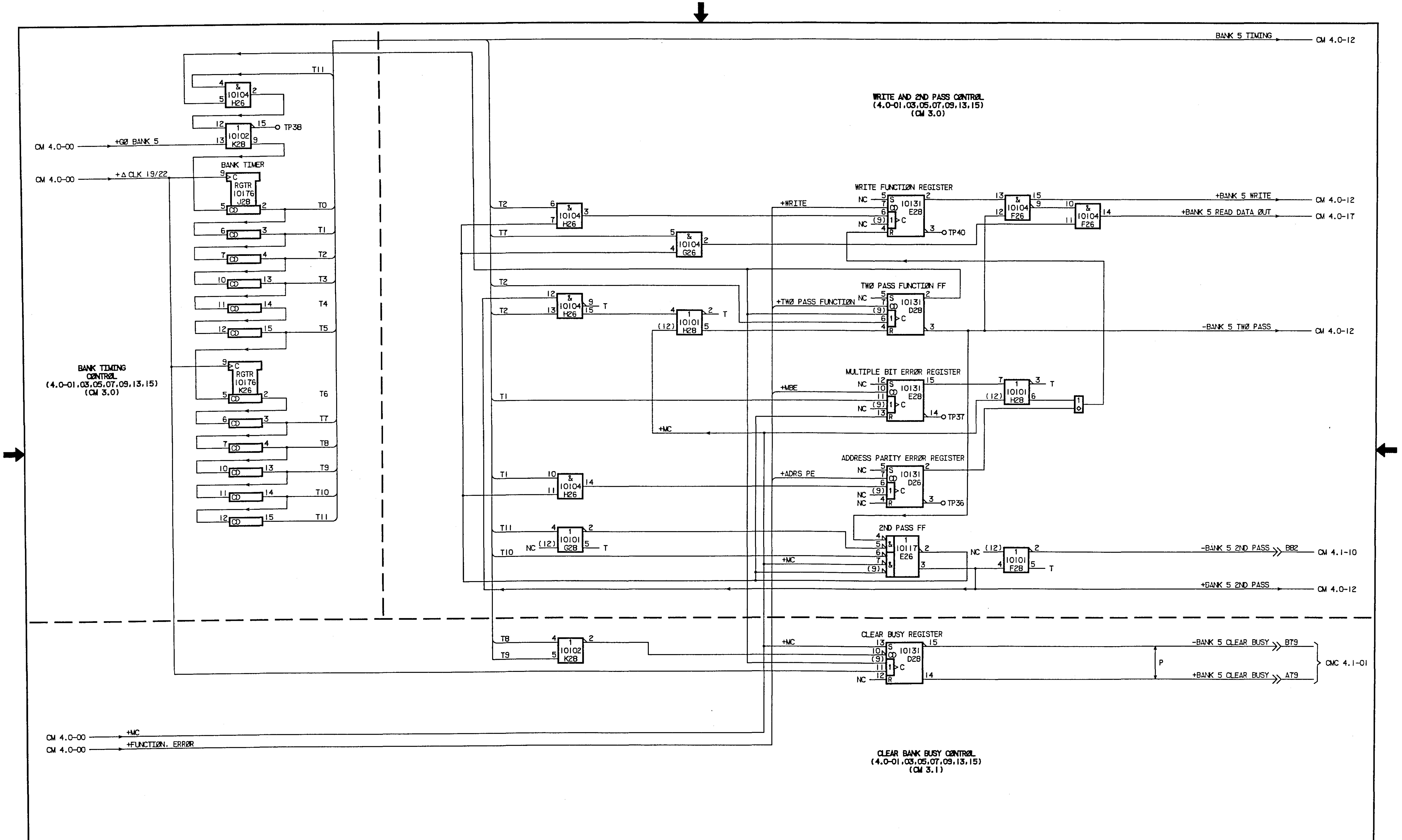
CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM
CM BANK 4 CØNTRØL
DATA, MEMØRY AND
ADDRESS CØNTRØL
3GSH,A13

CM 3.1.3
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.0-10	18-11



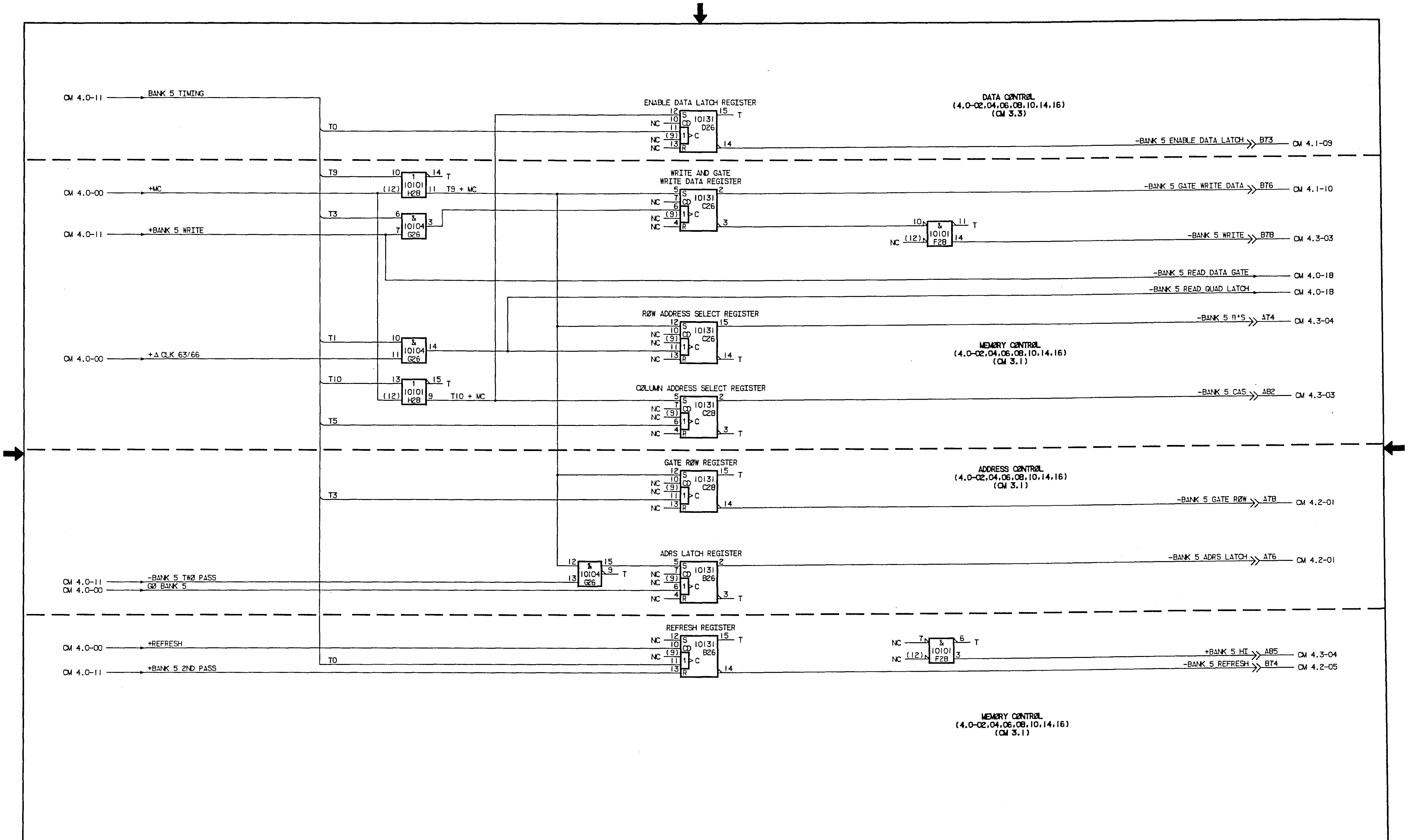
CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM CM 3.0.1
CM BANK 5 CONTROL
BANK TIMING, WRITE AND 2ND
PASS AND CLEAR BANK BUSY CONTROL
3GSH,A13 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.0-11	18-12



CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

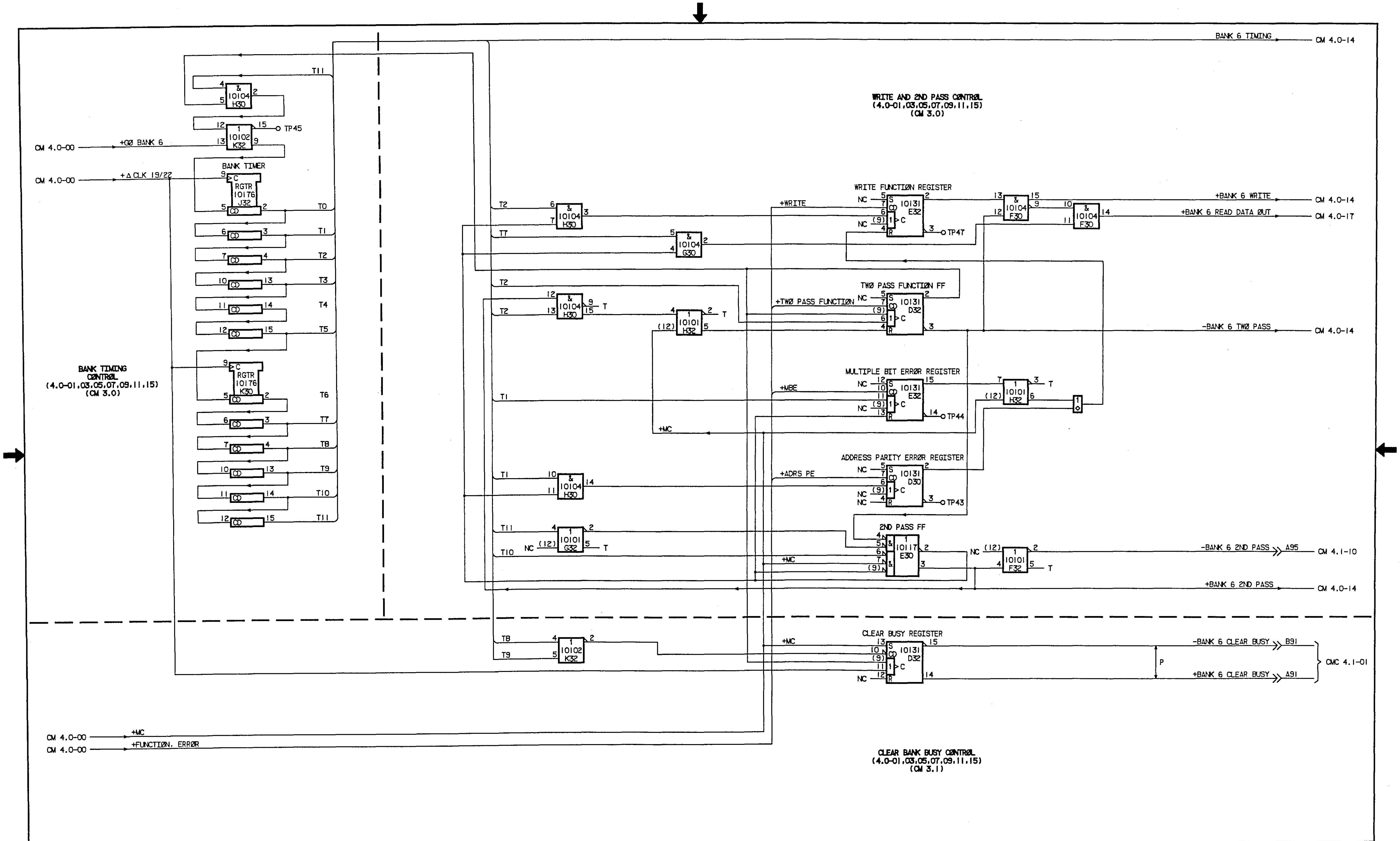
LEVEL 4 DIAGRAM
CM BANK 5 CØNTRØL
DATA, MEMØRY AND
ADDRESS CØNTRØL
3GSH,A13

CM 3.1.3

AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.0-12	18-13



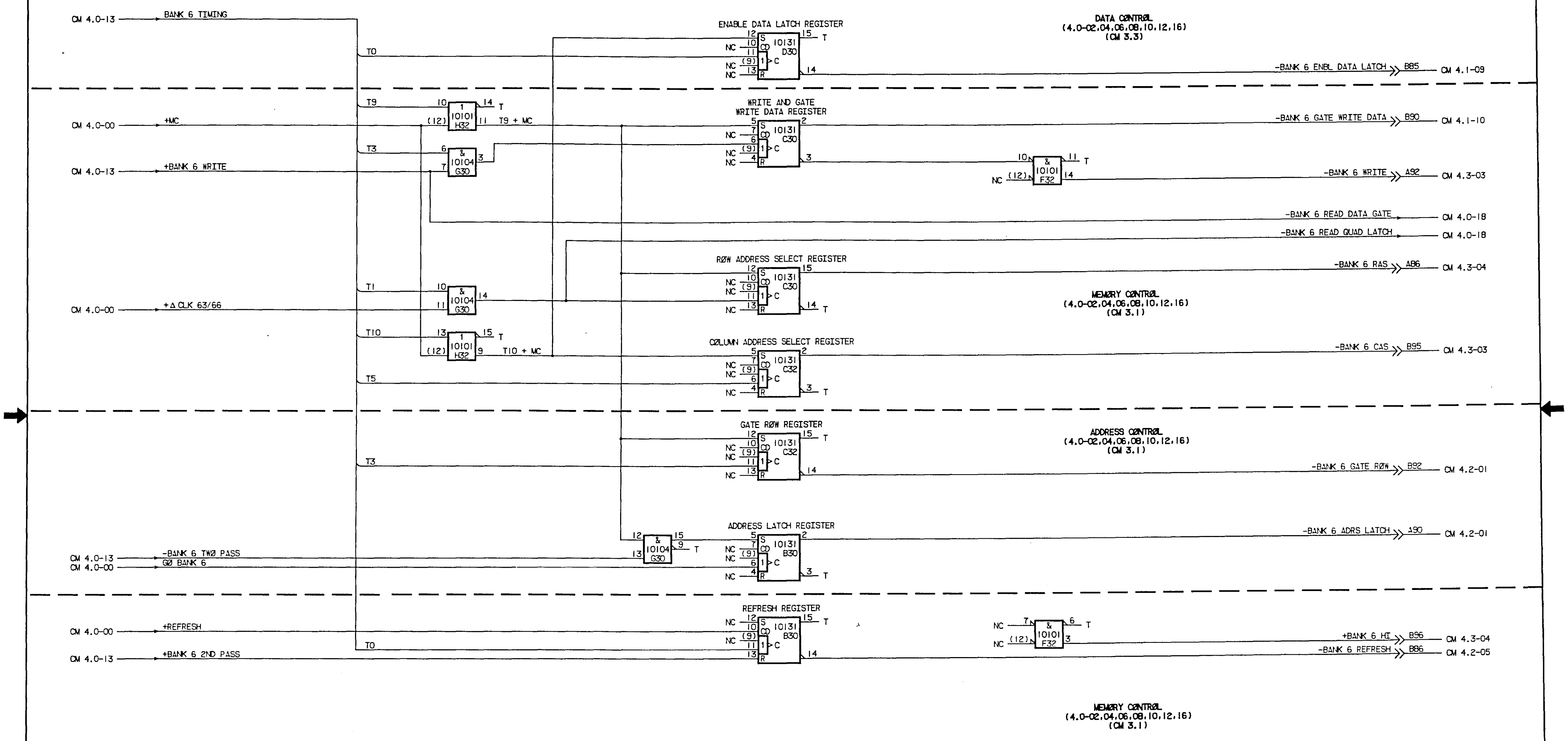
CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

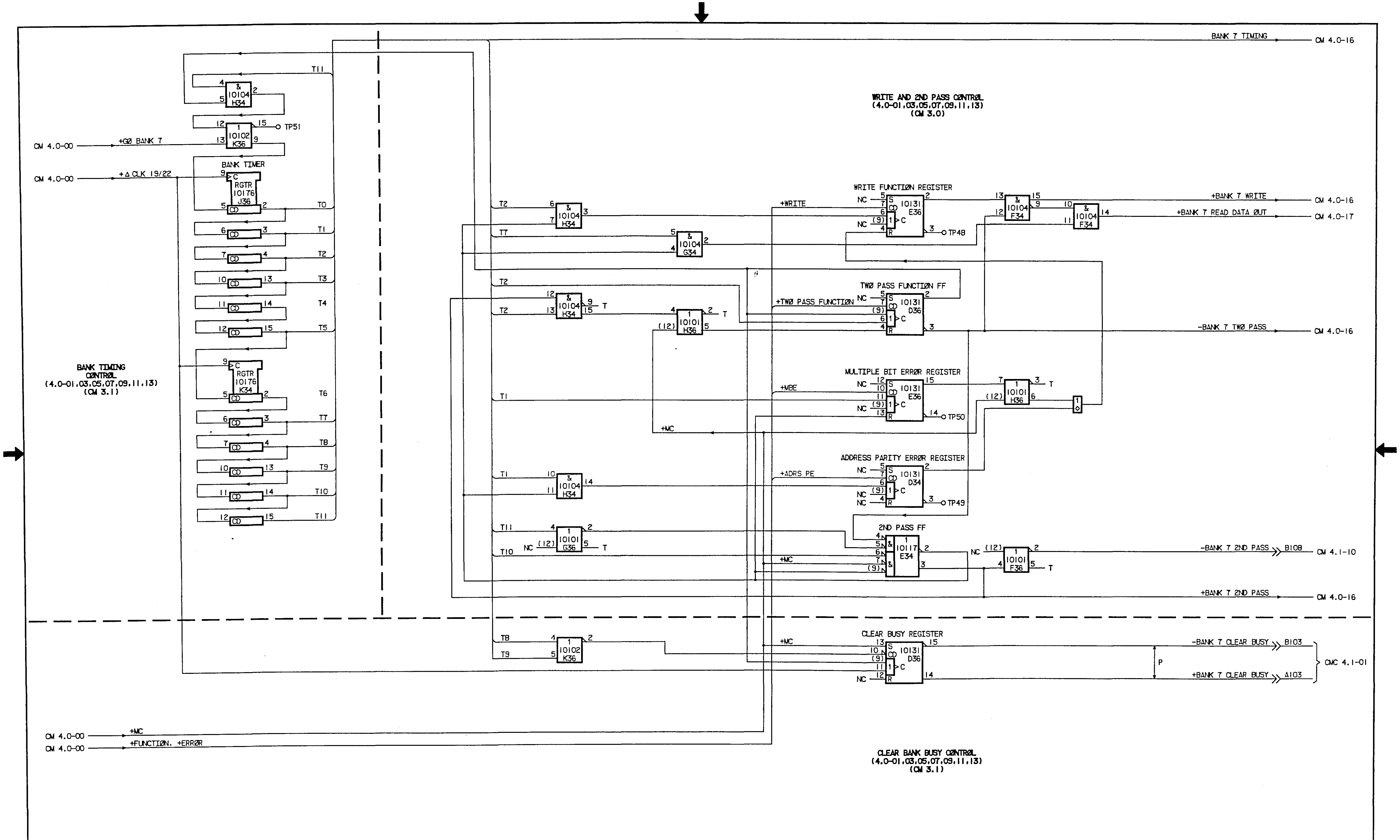
LEVEL 4 DIAGRAM CM 3.0.1
CM BANK 6 CONTROL
BANK TIMING, WRITE AND 2ND
PASS AND CLEAR BANK BUSY CONTROL
3GSH;A13 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.0-13	18-14



CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM CM BANK 6 CONTROL DATA, MEMORY AND ADDRESS CONTROL 3GSH;A13	CM 3.1.3 AD112-C	CAGE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION			SHEET CM 4.0-14		PAGE 18-15


BANK TIMING CONTROL (4.0-01,03,05,07,09,11,13) (CM 3.1)
WRITE AND 2ND PASS CONTROL (4.0-01,03,05,07,09,11,13) (CM 3.0)
CLEAR BANK BUSY CONTROL (4.0-01,03,05,07,09,11,13) (CM 3.1)
BANK TIMER
RGTR 10176 J36
RGTR 10176 K34
CM 4.0-00 +GO BANK 7
CM 4.0-00 +Δ CLK 19/22
TP51
T0
T1
T2
T3
T4
T5
T6
T7
T8
T9
T10
T11
WRITE FUNCTION REGISTER
TWO PASS FUNCTION FF
MULTIPLE BIT ERROR REGISTER
ADDRESS PARITY ERROR REGISTER
2ND PASS FF
CLEAR BUSY REGISTER
+WRITE
+TWO PASS FUNCTION
+MBE
+ADRS PE
+MC
NC
TP48
TP49
TP50
10104 H34
10104 G34
10101 H36
10131 E36
10131 D36
10131 D34
10117 E34
10104 F34
10101 F36
10101 G36
10102 K36
BANK 7 TIMING → CM 4.0-16
+BANK 7 WRITE → CM 4.0-16
+BANK 7 READ DATA OUT → CM 4.0-17
-BANK 7 TWO PASS → CM 4.0-16
-BANK 7 2ND PASS B108 CM 4.1-10
+BANK 7 2ND PASS → CM 4.0-16
-BANK 7 CLEAR BUSY B103
+BANK 7 CLEAR BUSY A103
CMC 4.1-01
P
CM 4.0-00 +MC
CM 4.0-00 +FUNCTION, +ERROR

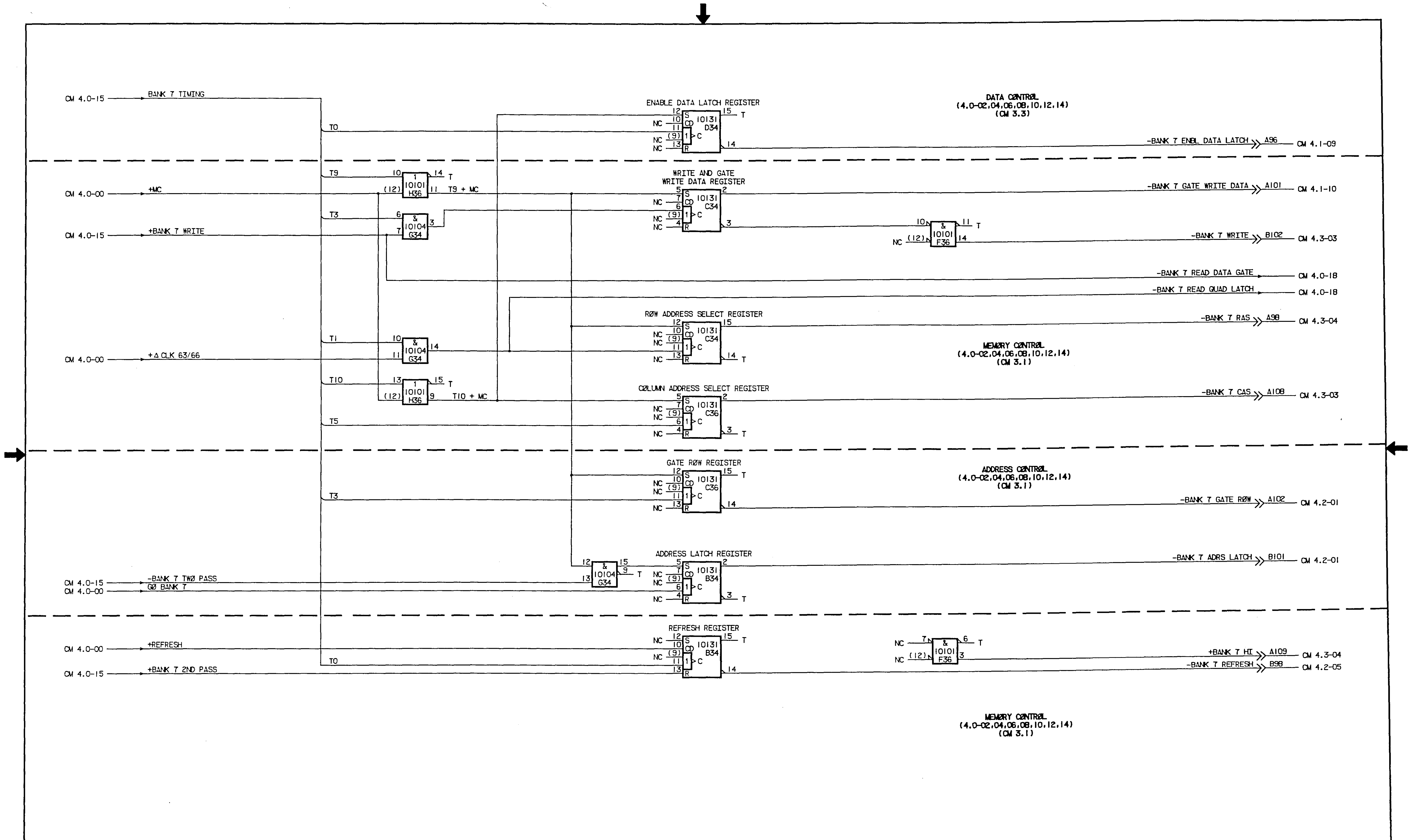
CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM CM 3.0.1
CM BANK 7 CONTROL
BANK TIMING, WRITE AND 2ND
PASS AND CLEAR BANK BUSY CONTROL
3GSH,A13 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.0-15	18-16


DATA CONTROL
(4.0-02,04,06,08,10,12,14)
(CM 3.3)
ENABLE DATA LATCH REGISTER
10131 D34
WRITE AND GATE WRITE DATA REGISTER
10131 C34
ROW ADDRESS SELECT REGISTER
10131 C34
COLUMN ADDRESS SELECT REGISTER
10131 C36
GATE ROW REGISTER
10131 C36
ADDRESS LATCH REGISTER
10131 B34
REFRESH REGISTER
10131 B34
10101 H36
10104 G34
10101 F36
MEMORY CONTROL
(4.0-02,04,06,08,10,12,14)
(CM 3.1)
ADDRESS CONTROL
(4.0-02,04,06,08,10,12,14)
(CM 3.1)
CM 4.0-15 BANK 7 TIMING
CM 4.0-00 +MC
CM 4.0-15 +BANK 7 WRITE
CM 4.0-00 +Δ CLK 63/66
CM 4.0-15 -BANK 7 TWO PASS
CM 4.0-00 GO BANK 7
CM 4.0-00 +REFRESH
CM 4.0-15 +BANK 7 2ND PASS
T0
T9
T3
T1
T10
T5
T9 + MC
T10 + MC
NC
-BANK 7 ENBL DATA LATCH A96 CM 4.1-09
-BANK 7 GATE WRITE DATA A101 CM 4.1-10
-BANK 7 WRITE B102 CM 4.3-03
-BANK 7 READ DATA GATE CM 4.0-18
-BANK 7 READ QUAD LATCH CM 4.0-18
-BANK 7 RAS A98 CM 4.3-04
-BANK 7 CAS A108 CM 4.3-03
-BANK 7 GATE ROW A102 CM 4.2-01
-BANK 7 ADRS LATCH B101 CM 4.2-01
+BANK 7 HI A109 CM 4.3-04
-BANK 7 REFRESH B98 CM 4.2-05

CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM
CM BANK 7 CONTROL
DATA, MEMORY AND
ADDRESS CONTROL
3GSH,A13

CM 3.1.3

AD112-C

CODE IDENT

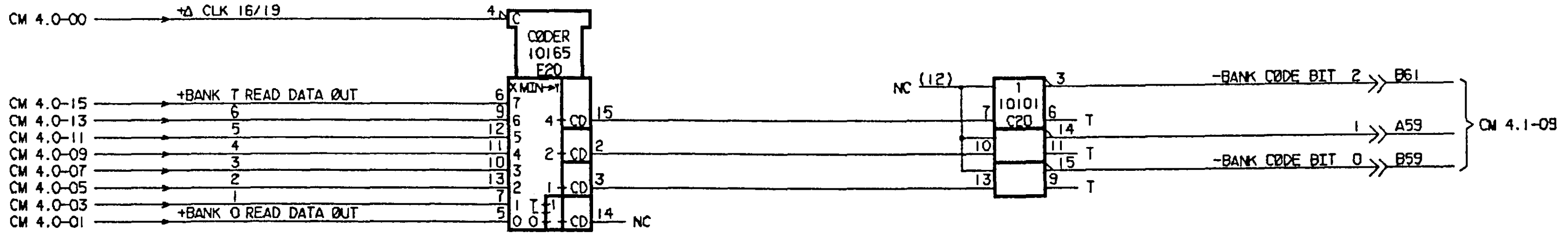
DWG NO 60458190

REV J

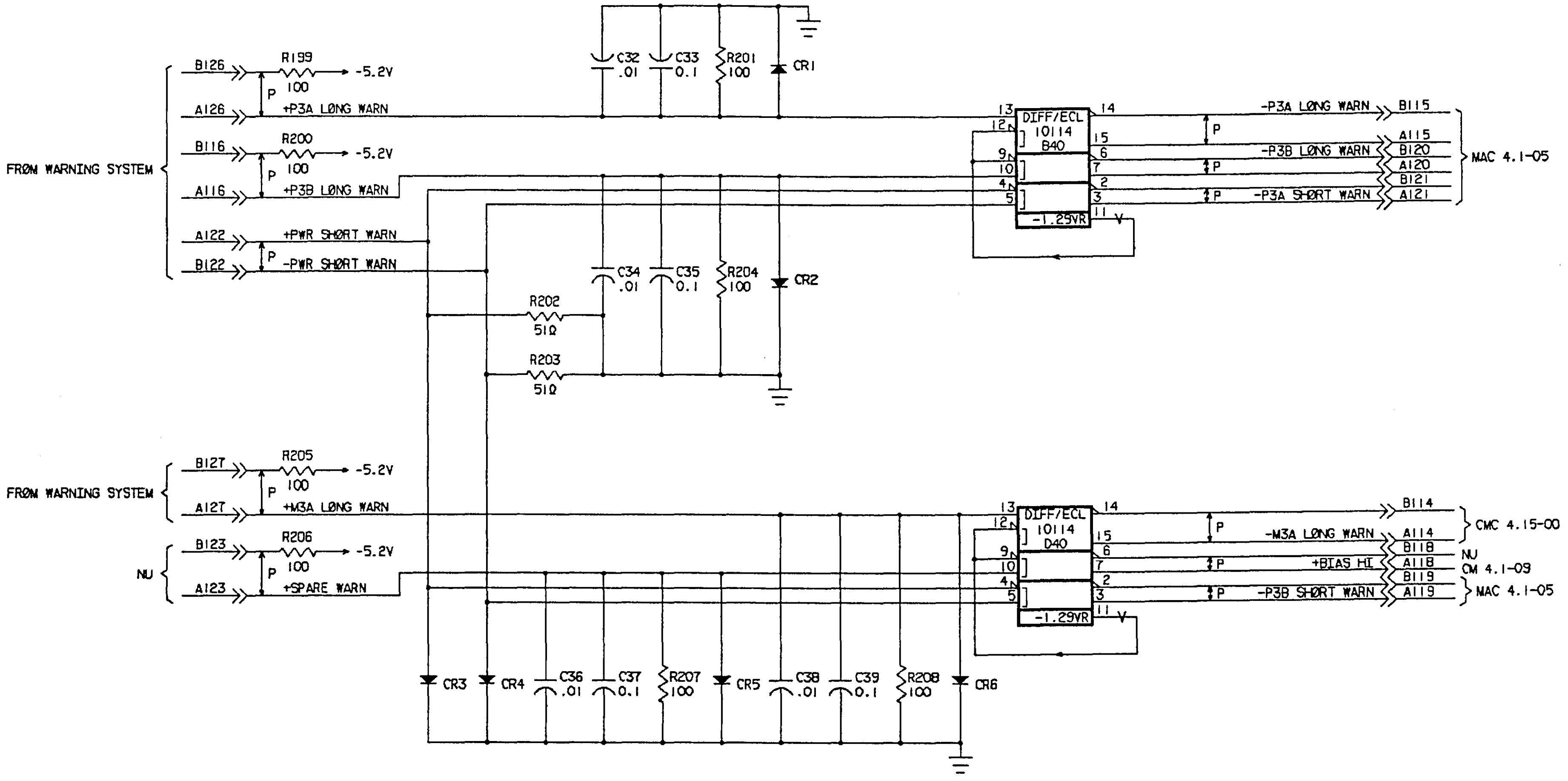
SHEET CM 4.0-16

PAGE 18-17

ENCODER
(CM 3.3)



WARNING RECEIVER/TRANSMITTER
(CM 3.0)

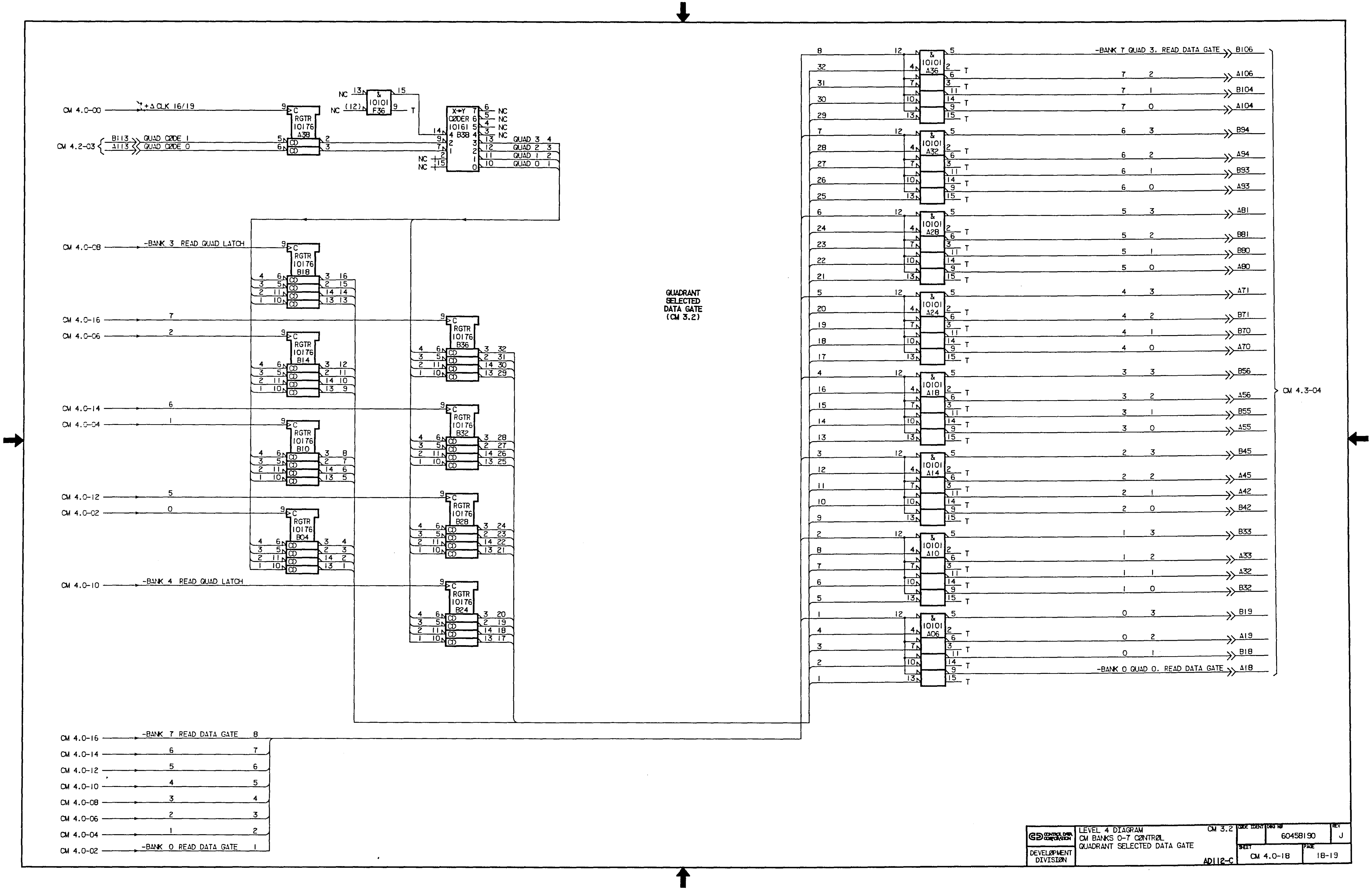


CONTROL DATA
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM - CM 3.0.3.3
CENTRAL MEMORY BANKS 0-7 CONTROL
ENCODER, WARNING RECEIVER/
TRANSMITTER
3GSH;A13
AD112-C

CODE IDENT	DWG NO	REV
	60458190	N

SHEET	PAGE
CM 4.0-17	18-18



CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM
CM BANKS 0-7 CØNTRØL
QUADRANT SELECTED DATA GATE

CM 3.2

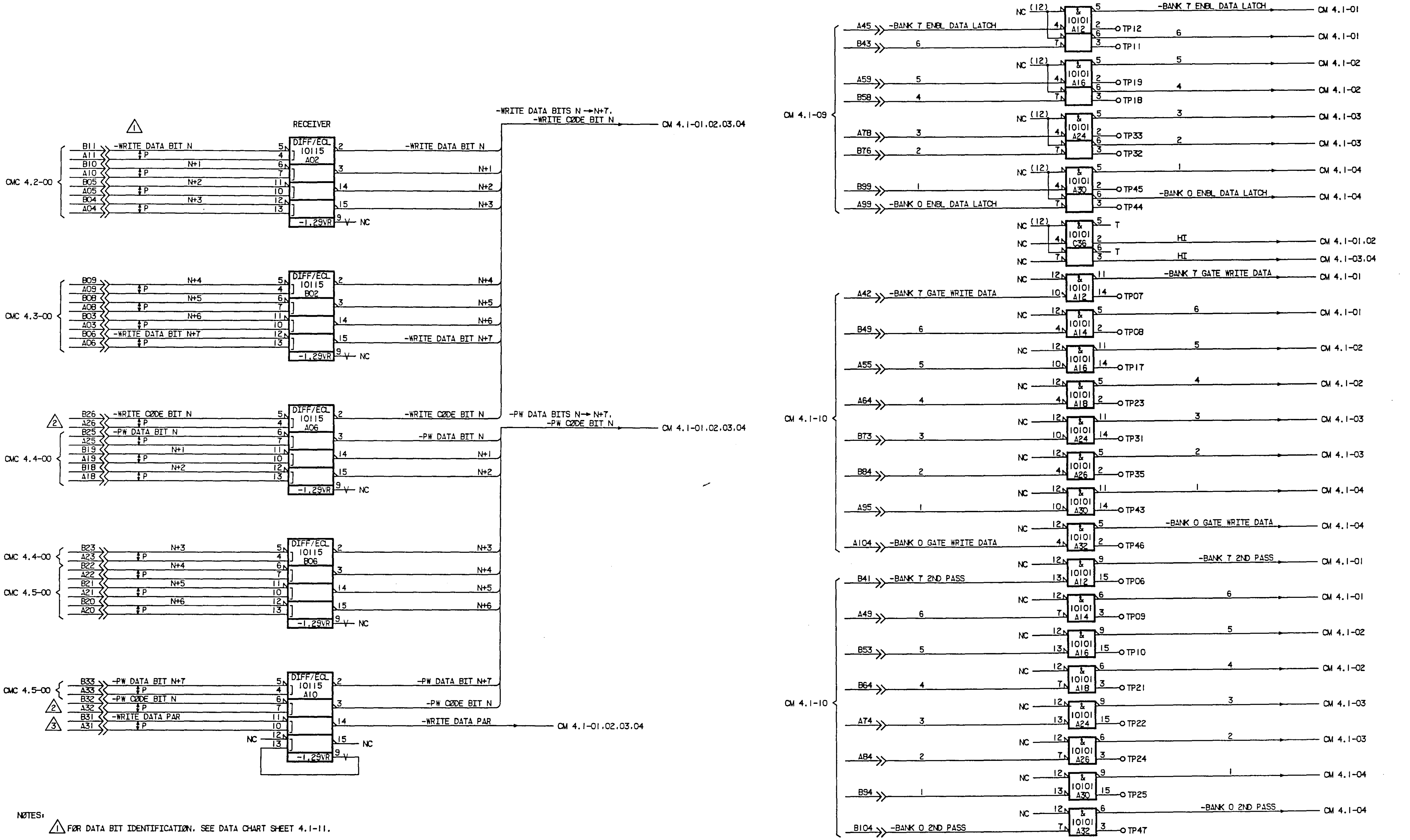
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.0-18	18-19

TEST POINT			TEST POINT		
1	+REFRESH	BANK 0	27		
2	-ADRS PE	BANK 0	28		
3	-MBE	BANK 0	29	-APE	BANK 4
4	-G0	BANK 0	30	-MBE	BANK 4
5	+2ND PASS	BANK 0	31	-G0	BANK 4
6	-WRITE	BANK 0	32		
7	-CLR BUSY	BANK 0	33	-WRITE	BANK 4
8	-APE	BANK 1	34		
9	-MBE	BANK 1	35		
10	-G0	BANK 1	36	-APE	BANK 5
11	-WRITE	BANK 1	37	-MBE	BANK 5
12	-APE	BANK 2	38	-G0	BANK 5
13	-MBE	BANK 2	39		
14	-G0	BANK 2	40	-WRITE	BANK 5
15			41		
16	-WRITE	BANK 2	42		
17			43	-APE	BANK 6
18			44	-MBE	BANK 6
19	-APE	BANK 3	45	-G0	BANK 6
20	-MBE	BANK 3	46		
21	-G0	BANK 3	47	-WRITE	BANK 6
22			48	-WRITE	BANK 7
23	-WRITE	BANK 3	49	-APE	BANK 7
24			50	-MBE	BANK 7
25			51	-G0	BANK 7
26	-CLK				

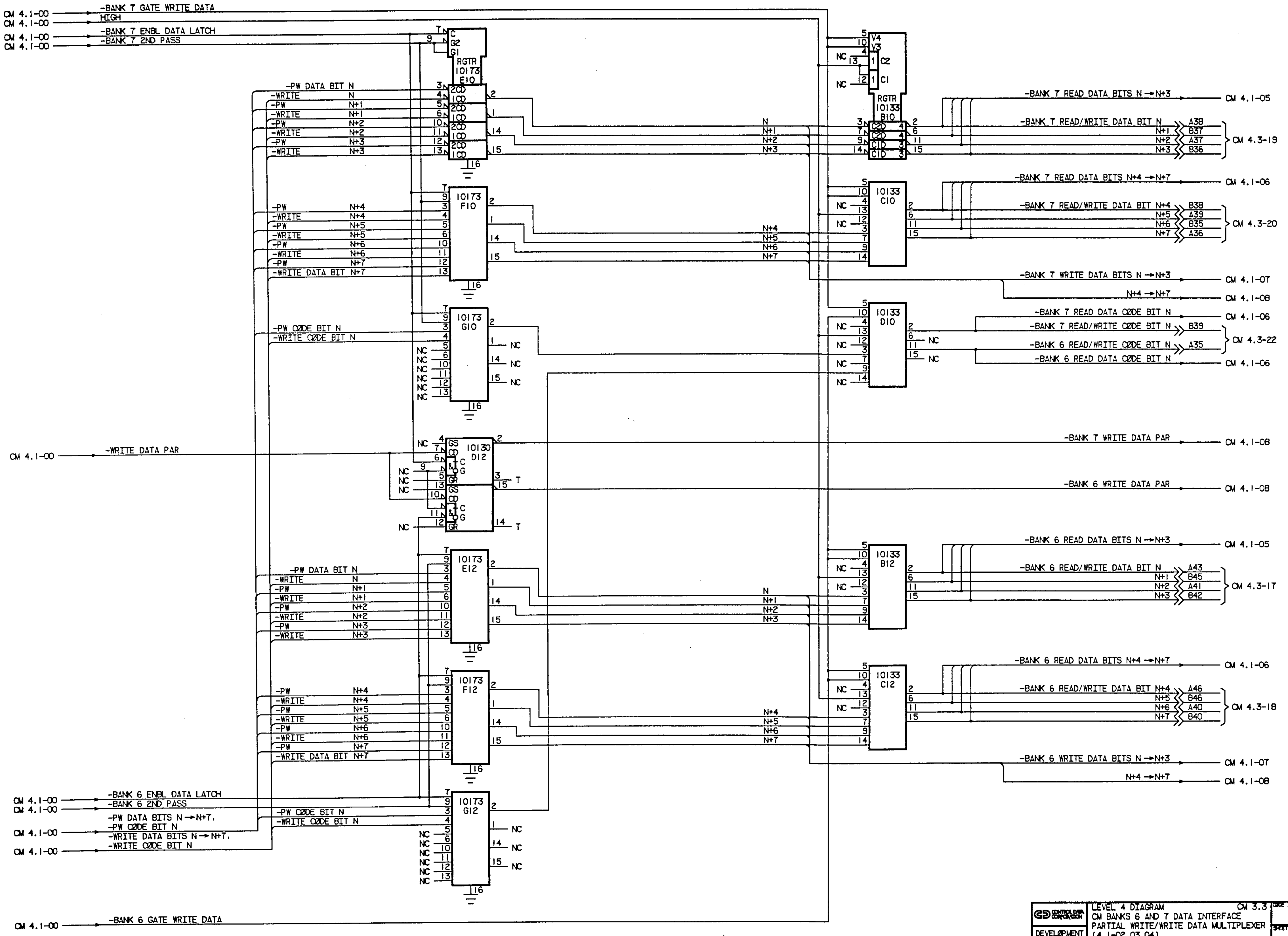
CONTROL DATA CORPORATION	LEVEL 4 TEST POINT CHART	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION	3GTH:813 AD112-C	SHEET CM 4.0-19	PAGE 18-20	



NOTES:

1. FOR DATA BIT IDENTIFICATION, SEE DATA CHART SHEET 4.1-11.
2. FOR WRITE CODE BIT IDENTIFICATION, SEE SHEET CM 4.1-11.
3. FOR DATA PARITY IDENTIFICATION, SEE SHEET CM 4.1-11.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM CM BANKS 0-7 DATA INTERFACE RECEIVER	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION	3GUH:A9-A12,B9-B12 AD112-C	SHEET CM 4.1-00		PAGE 18-21

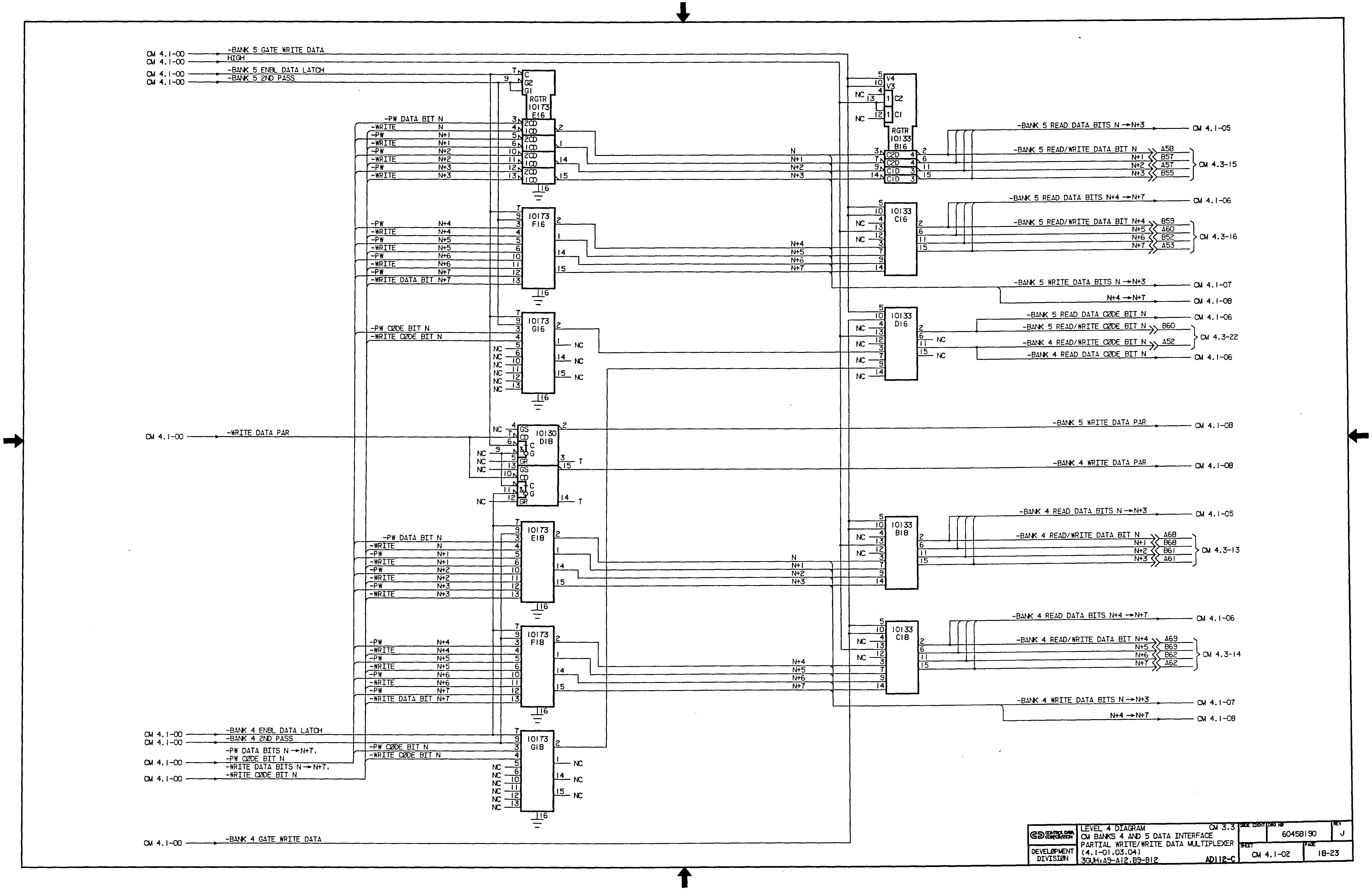

CM 4.1-00 -BANK 7 GATE WRITE DATA
CM 4.1-00 HIGH
CM 4.1-00 -BANK 7 ENBL DATA LATCH
CM 4.1-00 -BANK 7 2ND PASS
RGTR 10173 E10
10173 F10
10173 G10
10130 D12
10173 E12
10173 F12
10173 G12
RGTR 10133 B10
10133 C10
10133 D10
10133 B12
10133 C12
-PW DATA BIT N
-WRITE N
-PW N+1
-WRITE N+1
-PW N+2
-WRITE N+2
-PW N+3
-WRITE N+3
-PW N+4
-WRITE N+4
-PW N+5
-WRITE N+5
-PW N+6
-WRITE N+6
-PW N+7
-WRITE DATA BIT N+7
-PW CODE BIT N
-WRITE CODE BIT N
CM 4.1-00 -WRITE DATA PAR
NC
T
-BANK 7 READ DATA BITS N → N+3 CM 4.1-05
-BANK 7 READ/WRITE DATA BIT N A38
N+1 B37
N+2 A37
N+3 B36
CM 4.3-19
-BANK 7 READ DATA BITS N+4 → N+7 CM 4.1-06
-BANK 7 READ/WRITE DATA BIT N+4 B38
N+5 A39
N+6 B35
N+7 A36
CM 4.3-20
-BANK 7 WRITE DATA BITS N → N+3 CM 4.1-07
N+4 → N+7 CM 4.1-08
-BANK 7 READ DATA CODE BIT N CM 4.1-06
-BANK 7 READ/WRITE CODE BIT N B39
-BANK 6 READ/WRITE CODE BIT N A35
CM 4.3-22
-BANK 6 READ DATA CODE BIT N CM 4.1-06
-BANK 7 WRITE DATA PAR CM 4.1-08
-BANK 6 WRITE DATA PAR CM 4.1-08
-BANK 6 READ DATA BITS N → N+3 CM 4.1-05
-BANK 6 READ/WRITE DATA BIT N A43
N+1 B45
N+2 A41
N+3 B42
CM 4.3-17
-BANK 6 READ DATA BITS N+4 → N+7 CM 4.1-06
-BANK 6 READ/WRITE DATA BIT N+4 A46
N+5 B46
N+6 A40
N+7 B40
CM 4.3-18
-BANK 6 WRITE DATA BITS N → N+3 CM 4.1-07
N+4 → N+7 CM 4.1-08
CM 4.1-00 -BANK 6 ENBL DATA LATCH
CM 4.1-00 -BANK 6 2ND PASS
CM 4.1-00 -PW DATA BITS N → N+7, -PW CODE BIT N
CM 4.1-00 -WRITE DATA BITS N → N+7, -WRITE CODE BIT N
CM 4.1-00 -BANK 6 GATE WRITE DATA

CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM CM 3.3
CM BANKS 6 AND 7 DATA INTERFACE
PARTIAL WRITE/WRITE DATA MULTIPLEXER
(4.1-02.03.04)
3GUH;A9-A12,B9-B12 AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CM 4.1-01
PAGE 18-22


CM 4.1-00 -BANK 5 GATE WRITE DATA
CM 4.1-00 HIGH
CM 4.1-00 -BANK 5 ENBL DATA LATCH
CM 4.1-00 -BANK 5 2ND PASS
RGTR 10173 E16
-PW DATA BIT N
-WRITE N
-PW N+1
-WRITE N+1
-PW N+2
-WRITE N+2
-PW N+3
-WRITE N+3
10173 F16
-PW N+4
-WRITE N+4
-PW N+5
-WRITE N+5
-PW N+6
-WRITE N+6
-PW N+7
-WRITE DATA BIT N+7
10173 G16
-PW CODE BIT N
-WRITE CODE BIT N
CM 4.1-00 -WRITE DATA PAR
10130 D18
10173 E18
10173 F18
10173 G18
CM 4.1-00 -BANK 4 ENBL DATA LATCH
CM 4.1-00 -BANK 4 2ND PASS
CM 4.1-00 -PW DATA BITS N → N+7, -PW CODE BIT N
CM 4.1-00 -WRITE DATA BITS N → N+7, -WRITE CODE BIT N
CM 4.1-00 -BANK 4 GATE WRITE DATA
RGTR 10133 B16
10133 C16
10133 D16
10133 B18
10133 C18
-BANK 5 READ DATA BITS N → N+3 CM 4.1-05
-BANK 5 READ/WRITE DATA BIT N A58, N+1 B57, N+2 A57, N+3 B55 CM 4.3-15
-BANK 5 READ DATA BITS N+4 → N+7 CM 4.1-06
-BANK 5 READ/WRITE DATA BIT N+4 B59, N+5 A60, N+6 B52, N+7 A53 CM 4.3-16
-BANK 5 WRITE DATA BITS N → N+3 CM 4.1-07
N+4 → N+7 CM 4.1-08
-BANK 5 READ DATA CODE BIT N CM 4.1-06
-BANK 5 READ/WRITE CODE BIT N B60
-BANK 4 READ/WRITE CODE BIT N A52 CM 4.3-22
-BANK 4 READ DATA CODE BIT N CM 4.1-06
-BANK 5 WRITE DATA PAR CM 4.1-08
-BANK 4 WRITE DATA PAR CM 4.1-08
-BANK 4 READ DATA BITS N → N+3 CM 4.1-05
-BANK 4 READ/WRITE DATA BIT N A68, N+1 B68, N+2 B61, N+3 A61 CM 4.3-13
-BANK 4 READ DATA BITS N+4 → N+7 CM 4.1-06
-BANK 4 READ/WRITE DATA BIT N+4 A69, N+5 B69, N+6 B62, N+7 A62 CM 4.3-14
-BANK 4 WRITE DATA BITS N → N+3 CM 4.1-07
N+4 → N+7 CM 4.1-08

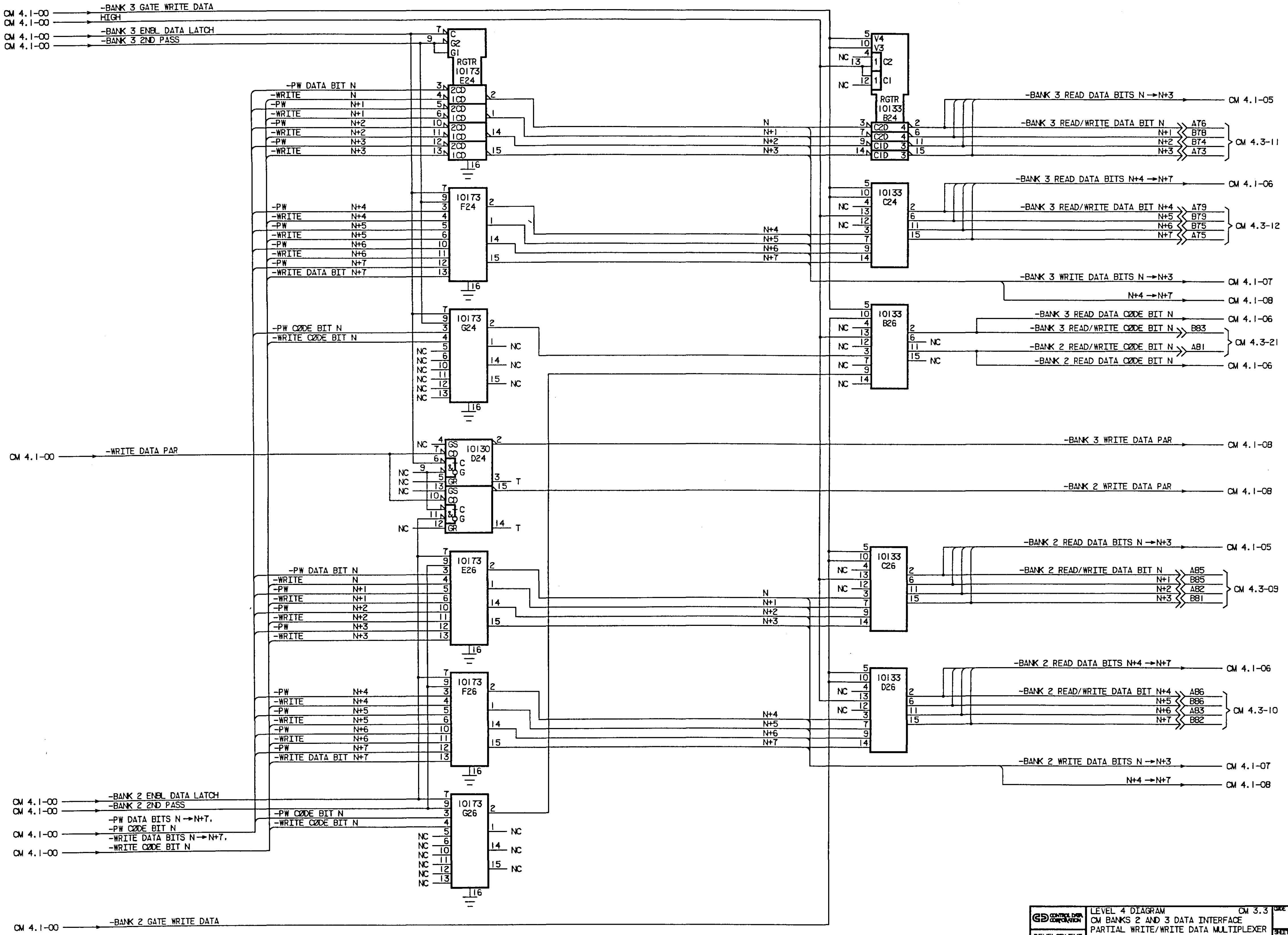
CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM CM 3.3
CM BANKS 4 AND 5 DATA INTERFACE
PARTIAL WRITE/WRITE DATA MULTIPLEXER
(4.1-01.03.04)
3GUH;A9-A12,B9-B12 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.1-02	18-23

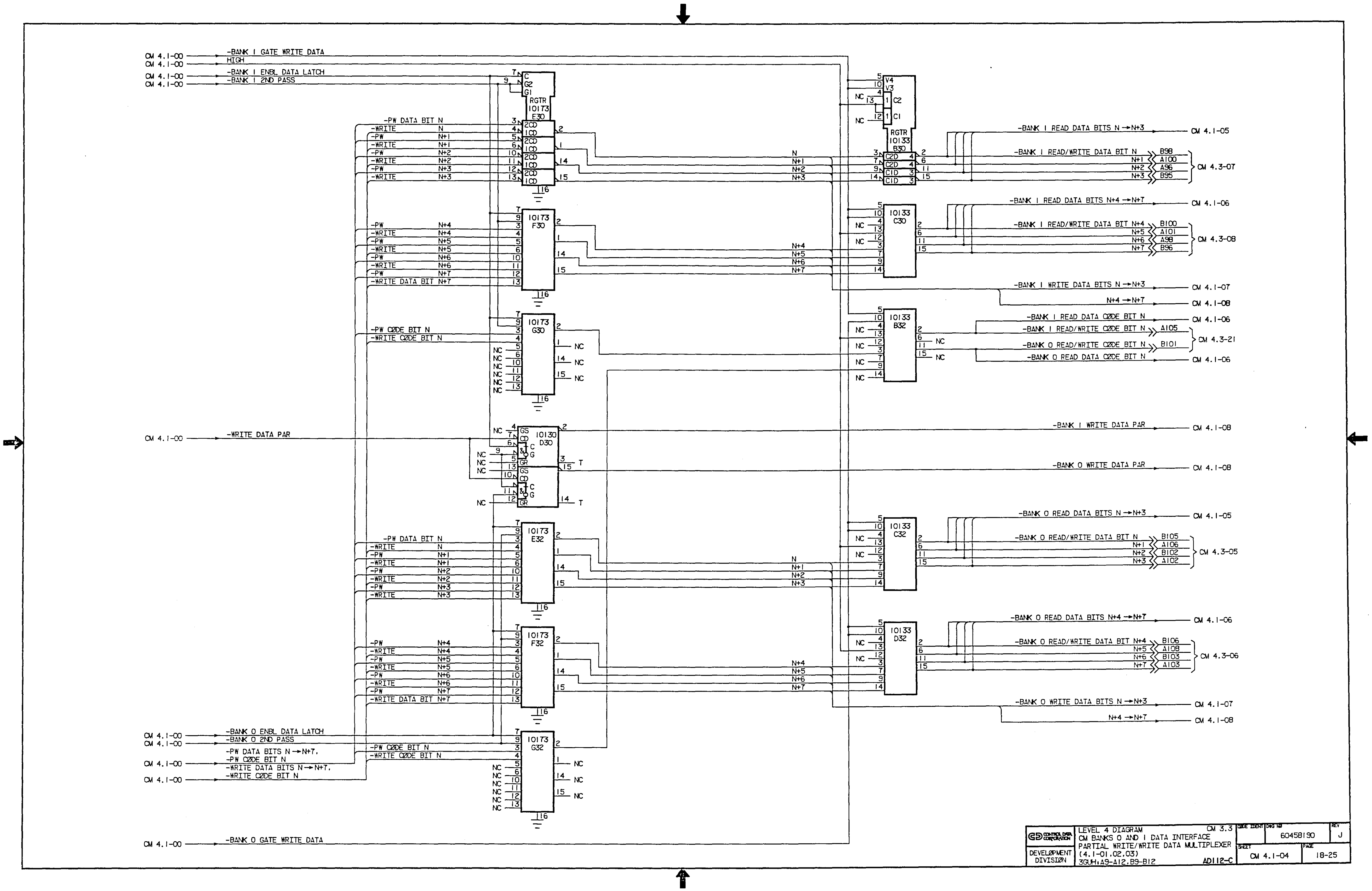

CM 4.1-00 -BANK 3 GATE WRITE DATA
CM 4.1-00 HIGH
CM 4.1-00 -BANK 3 ENBL DATA LATCH
CM 4.1-00 -BANK 3 2ND PASS
RGTR 10173 E24
-PW DATA BIT N
-WRITE N
-PW N+1
-WRITE N+1
-PW N+2
-WRITE N+2
-PW N+3
-WRITE N+3
10173 F24
-PW N+4
-WRITE N+4
-PW N+5
-WRITE N+5
-PW N+6
-WRITE N+6
-PW N+7
-WRITE DATA BIT N+7
10173 G24
-PW CØDE BIT N
-WRITE CØDE BIT N
NC
CM 4.1-00 -WRITE DATA PAR
10130 D24
T
10173 E26
10173 F26
10173 G26
CM 4.1-00 -BANK 2 ENBL DATA LATCH
CM 4.1-00 -BANK 2 2ND PASS
-PW DATA BITS N→N+7.
-PW CØDE BIT N
CM 4.1-00 -WRITE DATA BITS N→N+7.
CM 4.1-00 -WRITE CØDE BIT N
CM 4.1-00 -BANK 2 GATE WRITE DATA
RGTR 10133 B24
10133 C24
10133 B26
10133 C26
10133 D26
-BANK 3 READ DATA BITS N→N+3 CM 4.1-05
-BANK 3 READ/WRITE DATA BIT N A76
N+1 B78
N+2 B74
N+3 A73
CM 4.3-11
-BANK 3 READ DATA BITS N+4→N+7 CM 4.1-06
-BANK 3 READ/WRITE DATA BIT N+4 A79
N+5 B79
N+6 B75
N+7 A75
CM 4.3-12
-BANK 3 WRITE DATA BITS N→N+3 CM 4.1-07
N+4→N+7 CM 4.1-08
-BANK 3 READ DATA CØDE BIT N CM 4.1-06
-BANK 3 READ/WRITE CØDE BIT N B83
-BANK 2 READ/WRITE CØDE BIT N A81
CM 4.3-21
-BANK 2 READ DATA CØDE BIT N CM 4.1-06
-BANK 3 WRITE DATA PAR CM 4.1-08
-BANK 2 WRITE DATA PAR CM 4.1-08
-BANK 2 READ DATA BITS N→N+3 CM 4.1-05
-BANK 2 READ/WRITE DATA BIT N A85
N+1 B85
N+2 A82
N+3 B81
CM 4.3-09
-BANK 2 READ DATA BITS N+4→N+7 CM 4.1-06
-BANK 2 READ/WRITE DATA BIT N+4 A86
N+5 B86
N+6 A83
N+7 B82
CM 4.3-10
-BANK 2 WRITE DATA BITS N→N+3 CM 4.1-07
N+4→N+7 CM 4.1-08

CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM CM 3.3
CM BANKS 2 AND 3 DATA INTERFACE
PARTIAL WRITE/WRITE DATA MULTIPLEXER
(4.1-01,02,04)
3GUH,A9-A12,B9-B12 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.1-03	18-24


CM 4.1-00 -BANK 1 GATE WRITE DATA
CM 4.1-00 HIGH
CM 4.1-00 -BANK 1 ENBL DATA LATCH
CM 4.1-00 -BANK 1 2ND PASS
RGTR 10173 E30
10173 F30
10173 G30
10130 D30
10173 E32
10173 F32
10173 G32
RGTR 10133 B30
10133 C30
10133 B32
10133 C32
10133 D32
-PW DATA BIT N
-WRITE N
-PW N+1
-WRITE N+1
-PW N+2
-WRITE N+2
-PW N+3
-WRITE N+3
-PW N+4
-WRITE N+4
-PW N+5
-WRITE N+5
-PW N+6
-WRITE N+6
-PW N+7
-WRITE DATA BIT N+7
-PW CODE BIT N
-WRITE CODE BIT N
CM 4.1-00 -WRITE DATA PAR
NC
T
-BANK 1 READ DATA BITS N → N+3 CM 4.1-05
-BANK 1 READ/WRITE DATA BIT N B98
N+1 A100
N+2 A96
N+3 B95
CM 4.3-07
-BANK 1 READ DATA BITS N+4 → N+7 CM 4.1-06
-BANK 1 READ/WRITE DATA BIT N+4 B100
N+5 A101
N+6 A98
N+7 B96
CM 4.3-08
-BANK 1 WRITE DATA BITS N → N+3 CM 4.1-07
N+4 → N+7 CM 4.1-08
-BANK 1 READ DATA CODE BIT N CM 4.1-06
-BANK 1 READ/WRITE CODE BIT N A105
-BANK 0 READ/WRITE CODE BIT N B101
CM 4.3-21
-BANK 0 READ DATA CODE BIT N CM 4.1-06
-BANK 1 WRITE DATA PAR CM 4.1-08
-BANK 0 WRITE DATA PAR CM 4.1-08
-BANK 0 READ DATA BITS N → N+3 CM 4.1-05
-BANK 0 READ/WRITE DATA BIT N B105
N+1 A106
N+2 B102
N+3 A102
CM 4.3-05
-BANK 0 READ DATA BITS N+4 → N+7 CM 4.1-06
-BANK 0 READ/WRITE DATA BIT N+4 B106
N+5 A108
N+6 B103
N+7 A103
CM 4.3-06
-BANK 0 WRITE DATA BITS N → N+3 CM 4.1-07
N+4 → N+7 CM 4.1-08
CM 4.1-00 -BANK 0 ENBL DATA LATCH
CM 4.1-00 -BANK 0 2ND PASS
-PW DATA BITS N → N+7.
CM 4.1-00 -PW CODE BIT N
-WRITE DATA BITS N → N+7.
CM 4.1-00 -WRITE CODE BIT N
CM 4.1-00 -BANK 0 GATE WRITE DATA

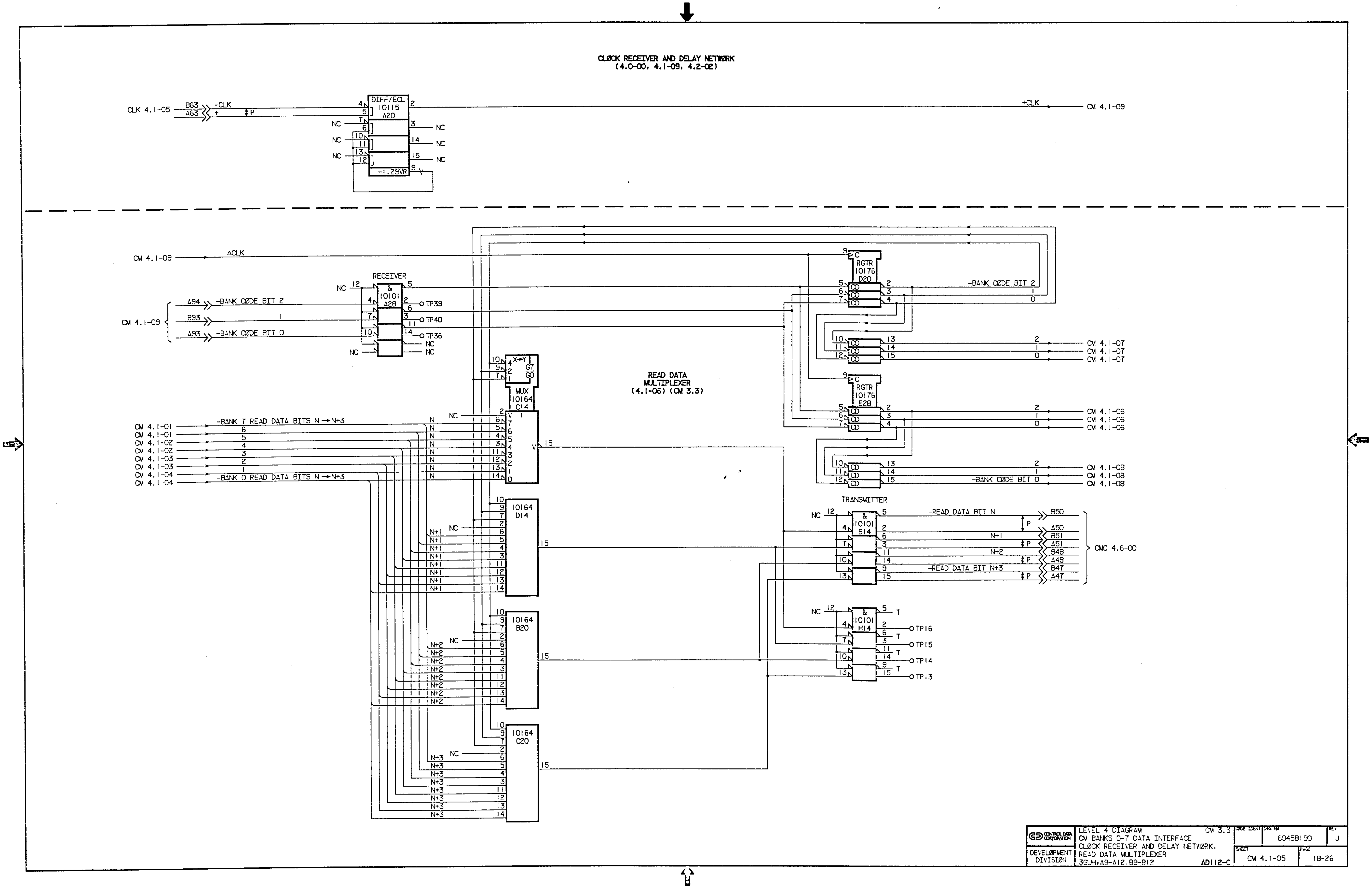
CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM CM 3.3
CM BANKS 0 AND 1 DATA INTERFACE
PARTIAL WRITE/WRITE DATA MULTIPLEXER
(4.1-01,02,03)
3GUH,A9-A12,B9-B12 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.1-04	18-25



CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM CM 3.3
CM BANKS 0-7 DATA INTERFACE
CLOCK RECEIVER AND DELAY NETWORK.
READ DATA MULTIPLEXER
3GUH:A9-A12,B9-B12 AD112-C

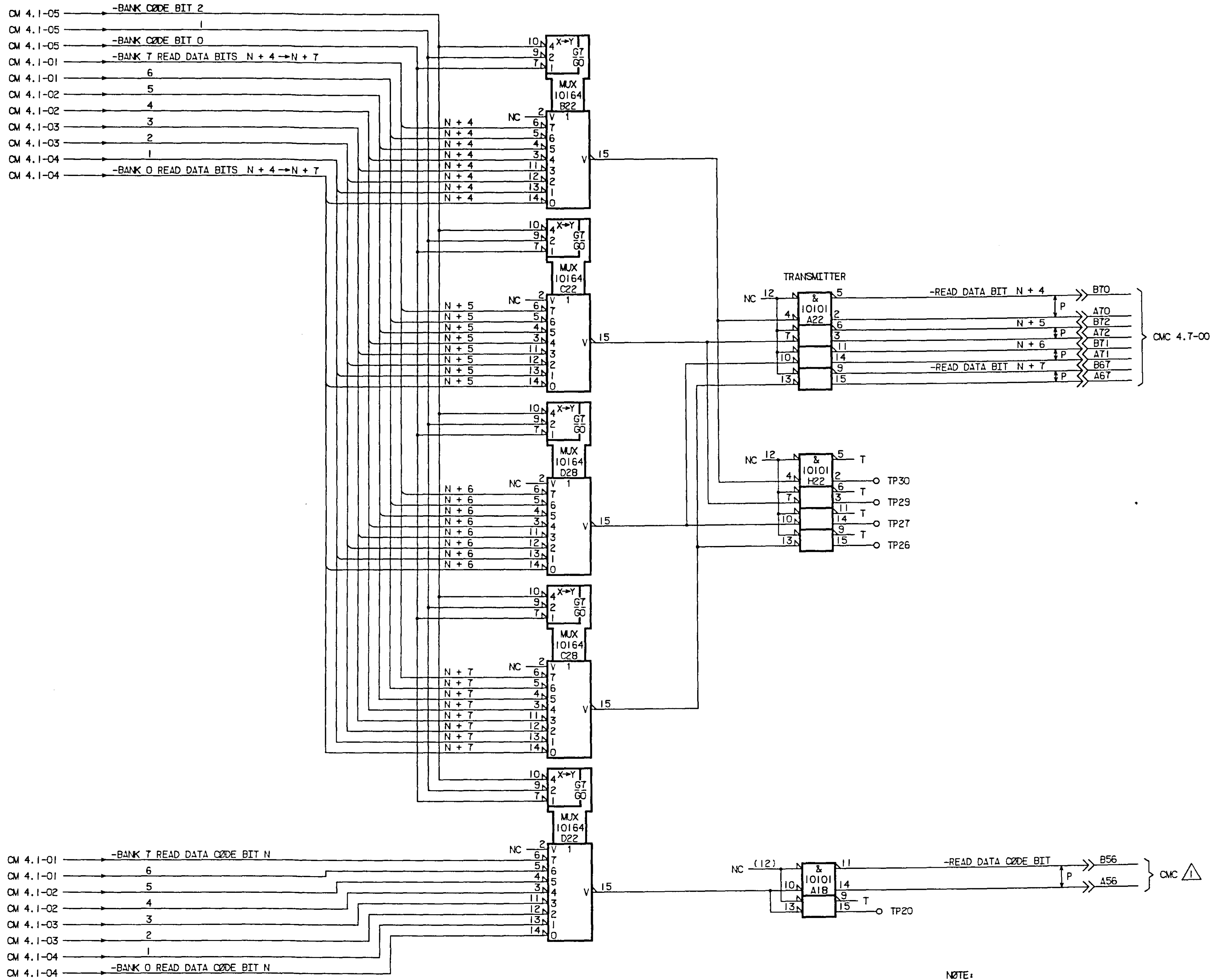
CODE IDENT

DWG NO 60458190

REV J

SHEET CM 4.1-05

PAGE 18-26



NØTE:

1. SEE CM 4.1-11 FØR READ DATA CØDE BIT IDENTIFICATIØN AND DESTINATIØN IN CMC.

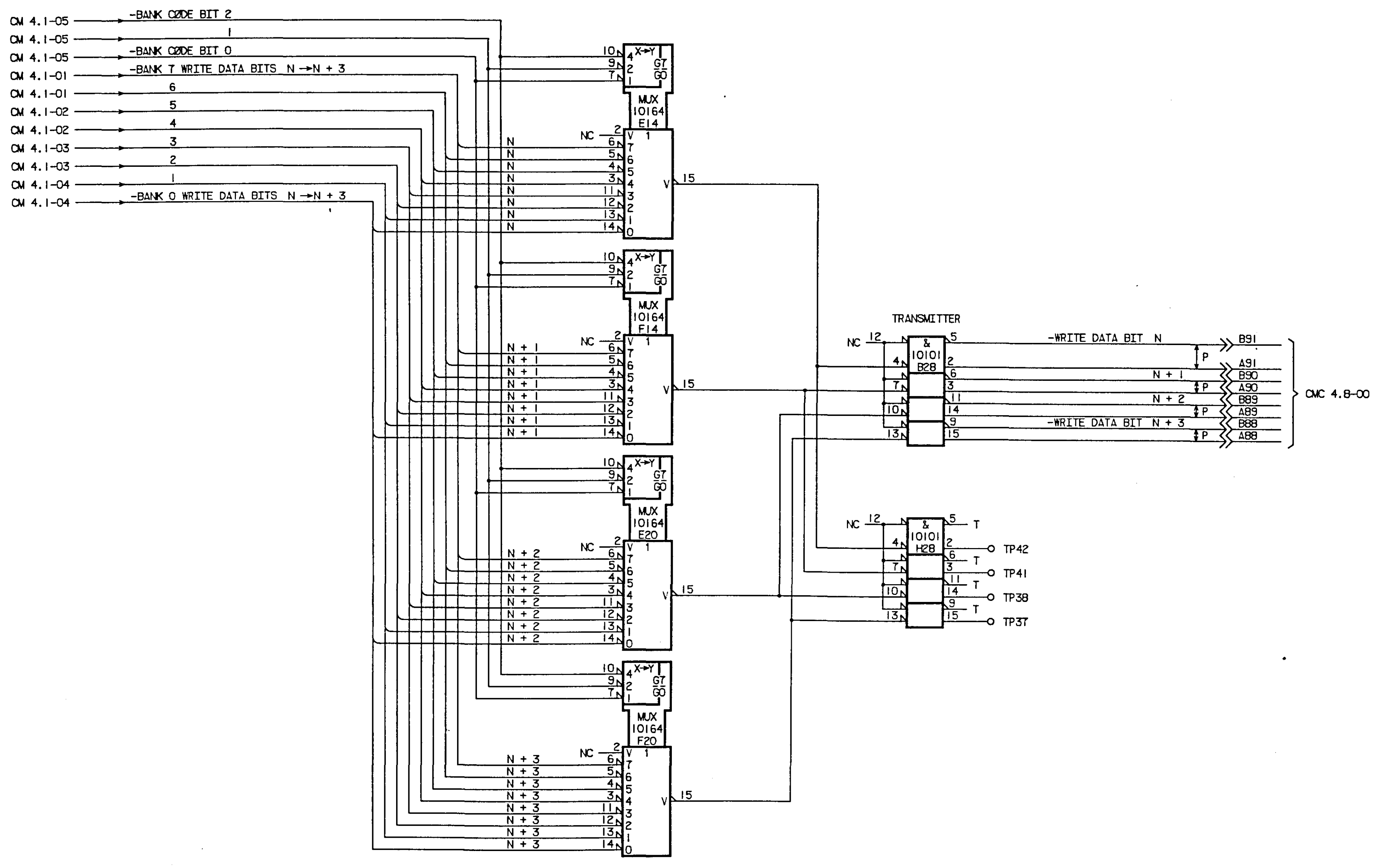
CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM
CM BANKS 0-7 DATA INTERFACE
READ DATA MULTIPLEXER
(4.1-05)
3GUH;A9-A12,B9-B12

CM 3.3
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.1-06	18-27



LEVEL 4 DIAGRAM
CM BANKS 0-7 DATA INTERFACE
WRITE DATA MULTIPLEXER
(4.1-08)
3GUH;A9-A12,B9-B12

CM 3.3

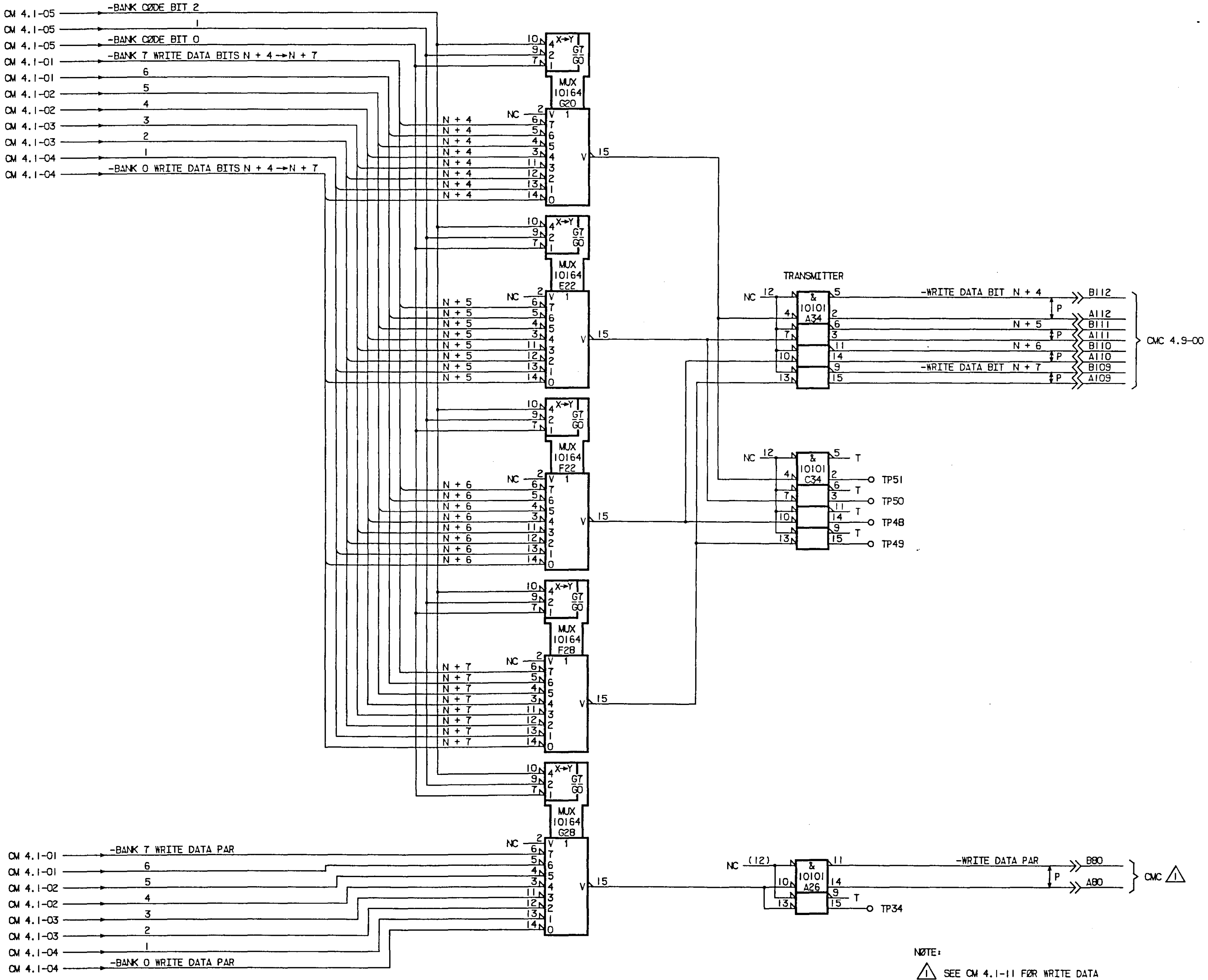
AD112-C

CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

CAGE IDENT	DWG NO	REV
	60458190	J

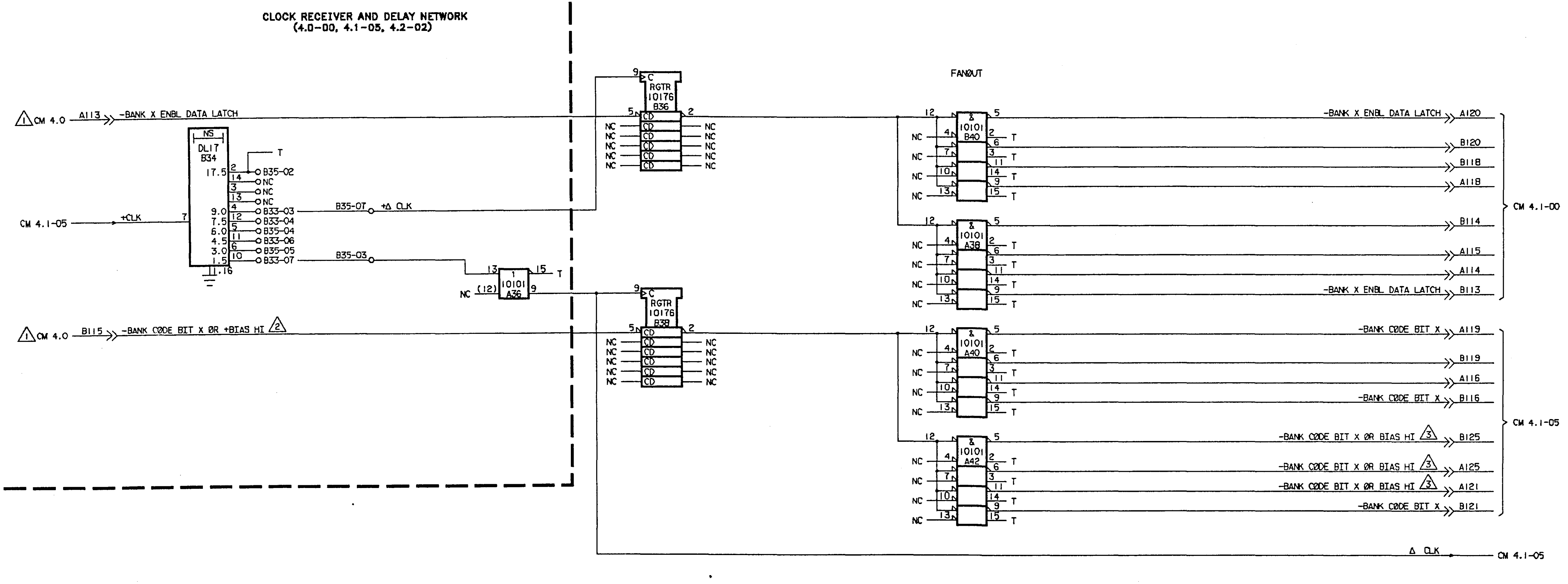
SHEET	PAGE
CM 4.1-07	18-28



NØTE:

△ SEE CM 4.1-11 FØR WRITE DATA PARITY IDENTIFICATIØN AND DESTINATIØN IN CMC.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM CM BANKS 0-7 DATA INTERFACE WRITE DATA MULTIPLEXER (4.1-07) 3GUH:A9-A12,B9-B12	CM 3.3 AD112-C	CODE IDENT	DWG NØ 60458190	REV J
DEVELØPMENT DIVISIØN			SHEET CM 4.1-08	PAGE 18-29	



NOTES:

1 TO IDENTIFY BANK X AND BANK CODE BIT X. USE CHART:

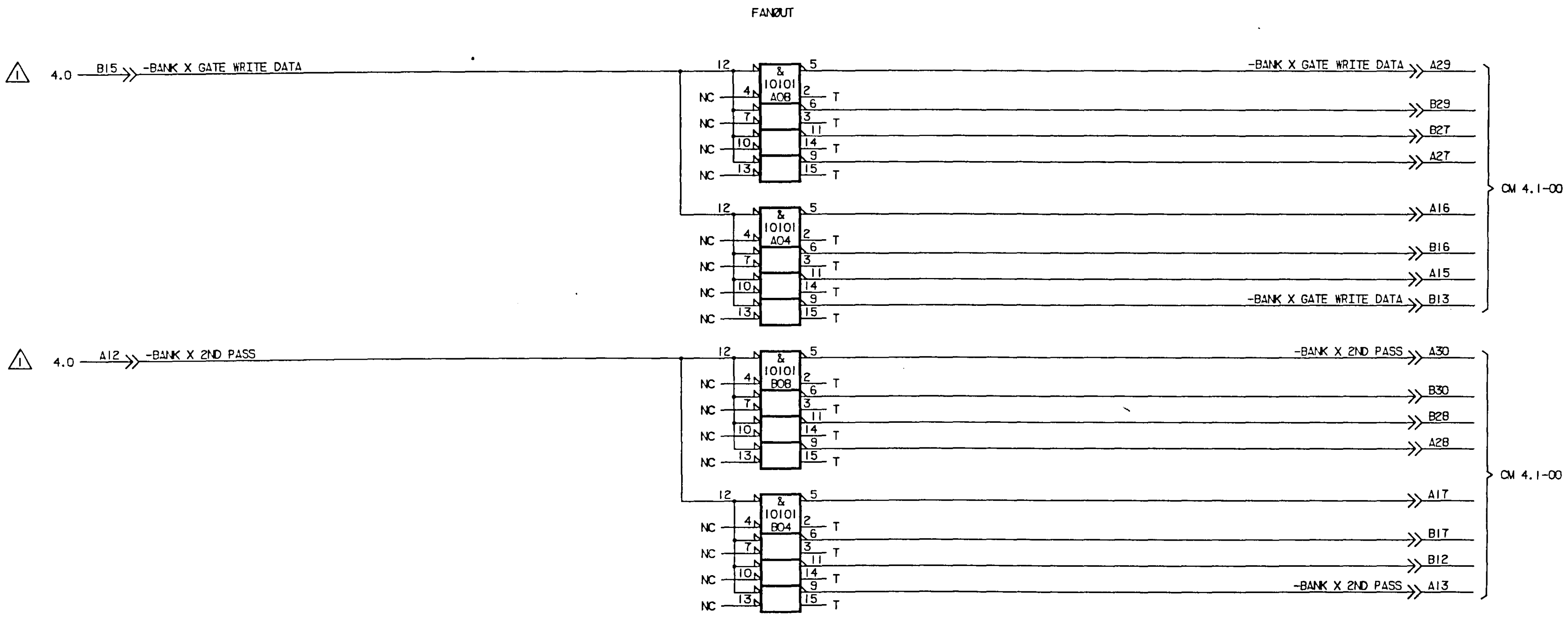
	BACK PANEL CHASSIS	BOARD LOCATION	SIGNAL	FROM
	A	09	-BANK 0 ENBL DATA LATCH	CM 4.0-02
	A	10	1	CM 4.0-04
	A	11	2	CM 4.0-06
	A	12	3	CM 4.0-08
	B	09	4	CM 4.0-10
	B	10	5	CM 4.0-12
	B	11	6	CM 4.0-14
	B	12	-BANK 7 ENBL DATA LATCH	CM 4.0-16
	A	09	-BANK CODE BIT 0	CM 4.0-17
	A	10	1	CM 4.0-17
	A	11	-BANK CODE BIT 2	CM 4.0-17
2	B	09	+BIAS HI	CM 4.0-17

3 BIAS HI GOES TO UNUSED ADDRESS PARITY ERROR INPUTS ON CMC 4.10-01 (7BUH).

CONTROL DATA
DEVELOPMENT DIVISION
LEVEL 4 DIAGRAM - CM 3.3
CM BANKS 0-7 DATA INTERFACE
CLOCK TUNING AND DELAY
NETWORK, FANOUT
3GUH;A9-A12,B9-B12
AD112-C

CODE IDENT	DWG NO	REV
	60458190	N

SHEET	PAGE
CM 4.1-09	18-30



NOTE:

⚠ TO IDENTIFY BANK X, USE CHART:

BACK PANEL CHASSIS	BOARD LOCATION	SIGNAL	FROM
A	09	-BANK 0 GATE WRITE DATA	CM 4.0-02
A	10	1	CM 4.0-04
A	11	2	CM 4.0-06
A	12	3	CM 4.0-08
B	09	4	CM 4.0-10
B	10	5	CM 4.0-12
B	11	6	CM 4.0-14
B	12	-BANK 7 GATE WRITE DATA	CM 4.0-16
A	09	-BANK 0 2ND PASS	CM 4.0-01
A	10	1	CM 4.0-03
A	11	2	CM 4.0-05
A	12	3	CM 4.0-07
B	09	4	CM 4.0-09
B	10	5	CM 4.0-11
B	11	6	CM 4.0-13
B	12	-BANK 7 2ND PASS	CM 4.0-15

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM CM BANKS 0-7 DATA INTERFACE FANOUT	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION	3GUH:A9-A12,B9-B12 AD112-C	SHEET CM 4.1-10	PAGE 18-31	

DATA BIT IDENTIFICATION.

	READ DATA	READ DATA BITS								WRITE DATA △1
		CHASSIS A				CHASSIS B				
		SLOT NUMBER				SLOT NUMBER				
BIT	TEST POINT	9	10	11	12	9	10	11	12	TEST POINT
N	16	0	8	16	24	32	40	48	56	42
N+1	15	1	9	17	25	33	41	49	57	41
N+2	14	2	10	18	26	34	42	50	58	38
N+3	13	3	11	19	27	35	43	51	59	37
N+4	30	4	12	20	28	36	44	52	60	51
N+5	29	5	13	21	29	37	45	53	61	50
N+6	27	6	14	22	30	38	46	54	62	48
N+7	26	7	15	23	31	39	47	55	63	49
CB	20	64	65	66	67	68	69	70	71	34

△1 VALID DURING READ CYCLE OF THE READ MODIFY WRITE FUNCTION.

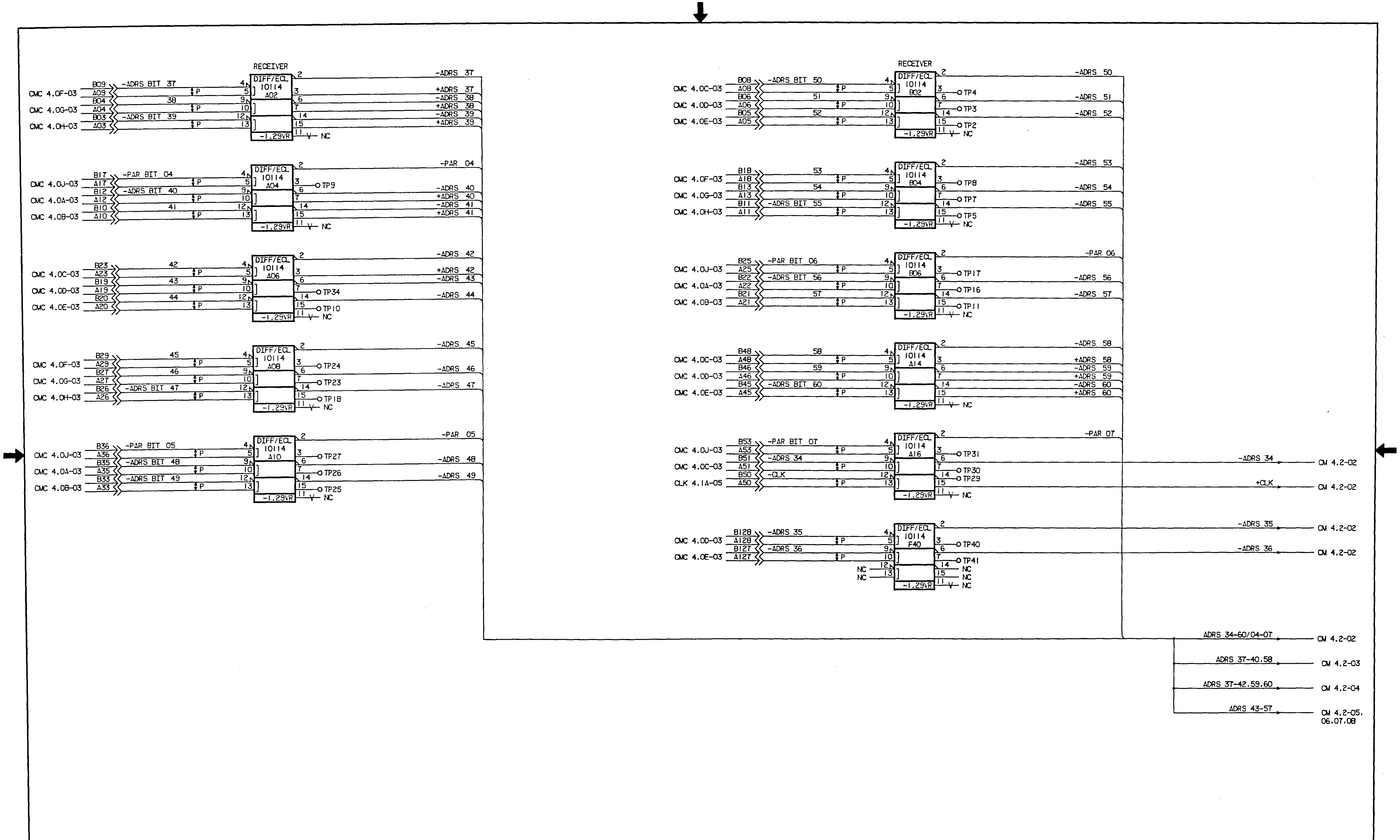
WRITE/PW CODE BIT IDENTIFICATION.

WRITE CODE BIT 64	CMC 4.2-00	PW CODE BIT 64	CMC 4.4-00
WRITE CODE BIT 65	CMC 4.2-00	PW CODE BIT 65	CMC 4.4-00
WRITE CODE BIT 66	CMC 4.2-00	PW CODE BIT 66	CMC 4.4-00
WRITE CODE BIT 67	CMC 4.2-00	PW CODE BIT 67	CMC 4.4-00
WRITE CODE BIT 68	CMC 4.3-00	PW CODE BIT 68	CMC 4.5-00
WRITE CODE BIT 69	CMC 4.3-00	PW CODE BIT 69	CMC 4.5-00
WRITE CODE BIT 70	CMC 4.3-00	PW CODE BIT 70	CMC 4.5-00
WRITE CODE BIT 71	CMC 4.3-00	PW CODE BIT 71	CMC 4.5-00

WRITE DATA PARITY IDENTIFICATION.		READ DATA CODE BIT IDENTIFICATION.	
WRITE DATA PARITY 64	CMC 4.2-00	READ DATA CODE BIT 64	CMC 4.6-00
WRITE DATA PARITY 65	CMC 4.2-00	READ DATA CODE BIT 65	CMC 4.6-00
WRITE DATA PARITY 66	CMC 4.2-00	READ DATA CODE BIT 66	CMC 4.6-00
WRITE DATA PARITY 67	CMC 4.2-00	READ DATA CODE BIT 67	CMC 4.6-00
WRITE DATA PARITY 68	CMC 4.3-00	READ DATA CODE BIT 68	CMC 4.7-00
WRITE DATA PARITY 69	CMC 4.3-00	READ DATA CODE BIT 69	CMC 4.7-00
WRITE DATA PARITY 70	CMC 4.3-00	READ DATA CODE BIT 70	CMC 4.7-00
WRITE DATA PARITY 71	CMC 4.3-00	READ DATA CODE BIT 71	CMC 4.7-00

TEST POINTS		TEST POINTS	
06	+BANK 7 2ND PASS	31	+BANK 3 GATE WRITE DATA
07	+BANK 7 GATE WRITE DATA	32	+BANK 2 ENBL DATA LATCH
08	+BANK 6 GATE WRITE DATA	33	+BANK 3 ENBL DATA LATCH
09	+BANK 6 2ND PASS	34	+WRITE PAR BIT
10	+BANK 5 2ND PASS	35	+BANK 2 GATE WRITE DATA
11	+BANK 6 ENBL DATA LATCH	36	+BANK CODE BIT 0
12	+BANK 7 ENBL DATA LATCH	37	+WRITE DATA BIT N+3
13	+READ DATA BIT N+3	38	+WRITE DATA BIT N+2
14	+READ DATA BIT N+2	39	+BANK CODE BIT 2
15	+READ DATA BIT N+1	40	+BANK CODE BIT 1
16	+READ DATA BIT N	41	+WRITE DATA BIT N+1
17	+BANK 5 GATE WRITE DATA	42	+WRITE DATA BIT N
18	+BANK 4 ENBL DATA LATCH	43	+BANK 1 GATE WRITE DATA
19	+BANK 5 ENBL DATA LATCH	44	+BANK 0 ENBL DATA LATCH
20	+READ DATA CODE BIT	45	+BANK 1 ENBL DATA LATCH
21	+BANK 4 2ND PASS	46	+BANK 0 GATE WRITE DATA
22	+BANK 3 2ND PASS	47	+BANK 0 2ND PASS
23	+BANK 4 GATE WRITE DATA	48	+WRITE DATA BIT N+7
24	+BANK 2 2ND PASS	49	+WRITE DATA BIT N+6
25	+BANK 1 2ND PASS	50	+WRITE DATA BIT N+5
26	+READ DATA BIT N+7	51	+WRITE DATA BIT N+4
27	+READ DATA BIT N+6		
29	+READ DATA BIT N+5		
30	+READ DATA BIT N+4		

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM CM BANKS 0-7 DATA INTERFACE	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION	3GUH:A9-A12,B9-B12 AD112-C	SHEET CM 4.1-11	PAGE 18-32	



CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

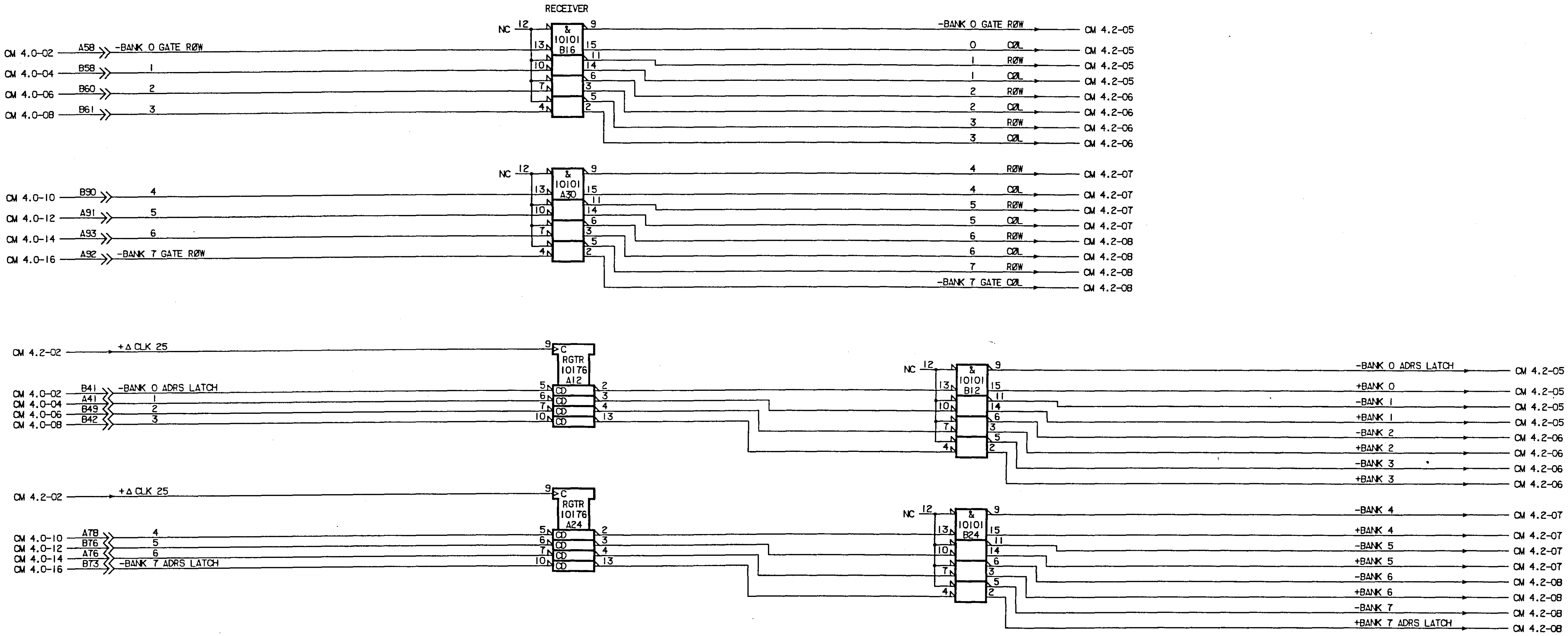
LEVEL 4 DIAGRAM
CM BANKS 0-7 ADDRESS
RECEIVER

3GTH1B13

AD112-C

CODE IDENT | DWG NO 60458190 | REV J

SHEET CM 4.2-00 | PAGE 18-33



CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CM 3.2
CM BANKS 0-7 ADDRESS
RECEIVER, REGISTERS

3GTH,B13

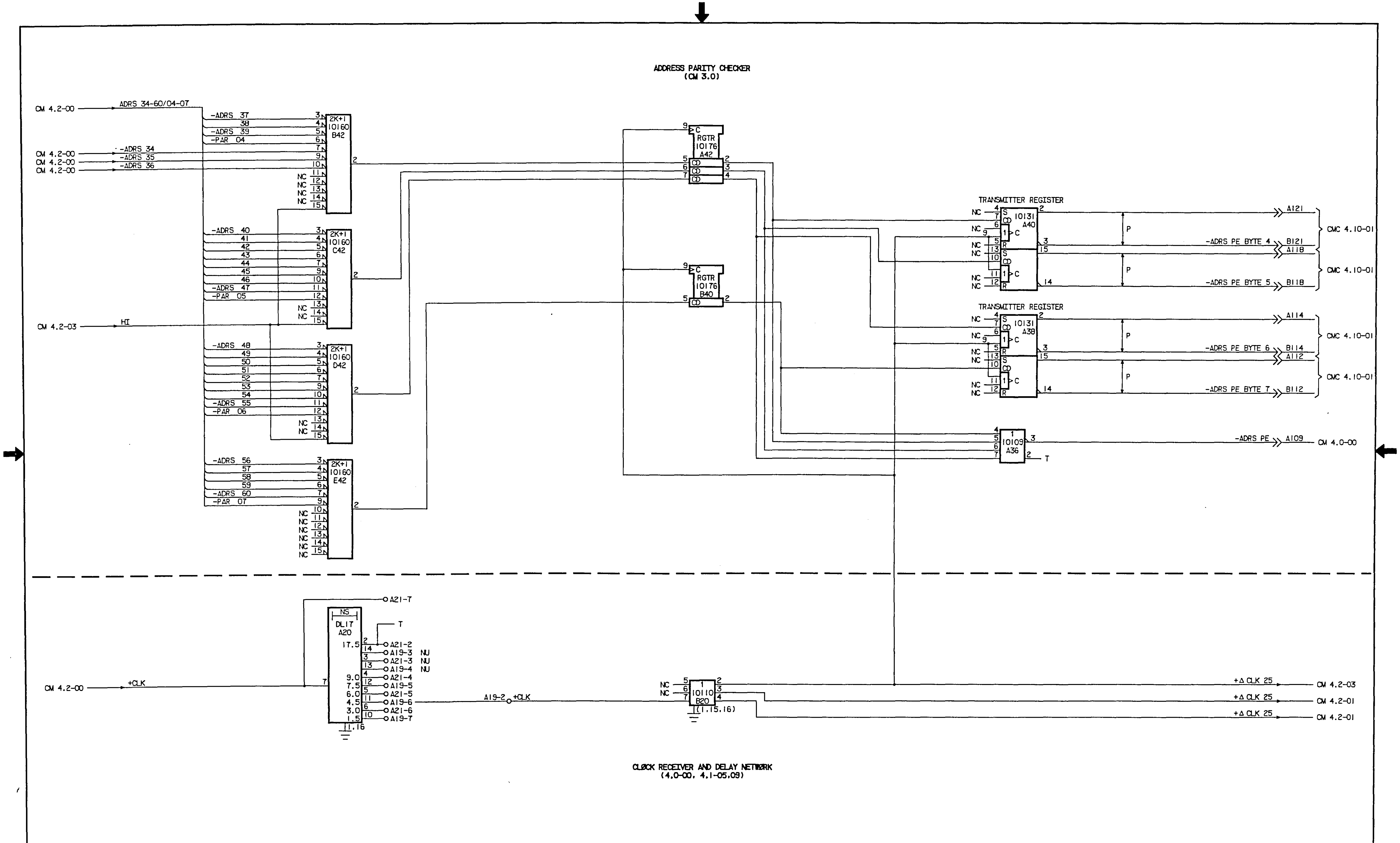
AD112-C

DWG NO 60458190

REV J

SHEET CM 4.2-01

PAGE 18-34



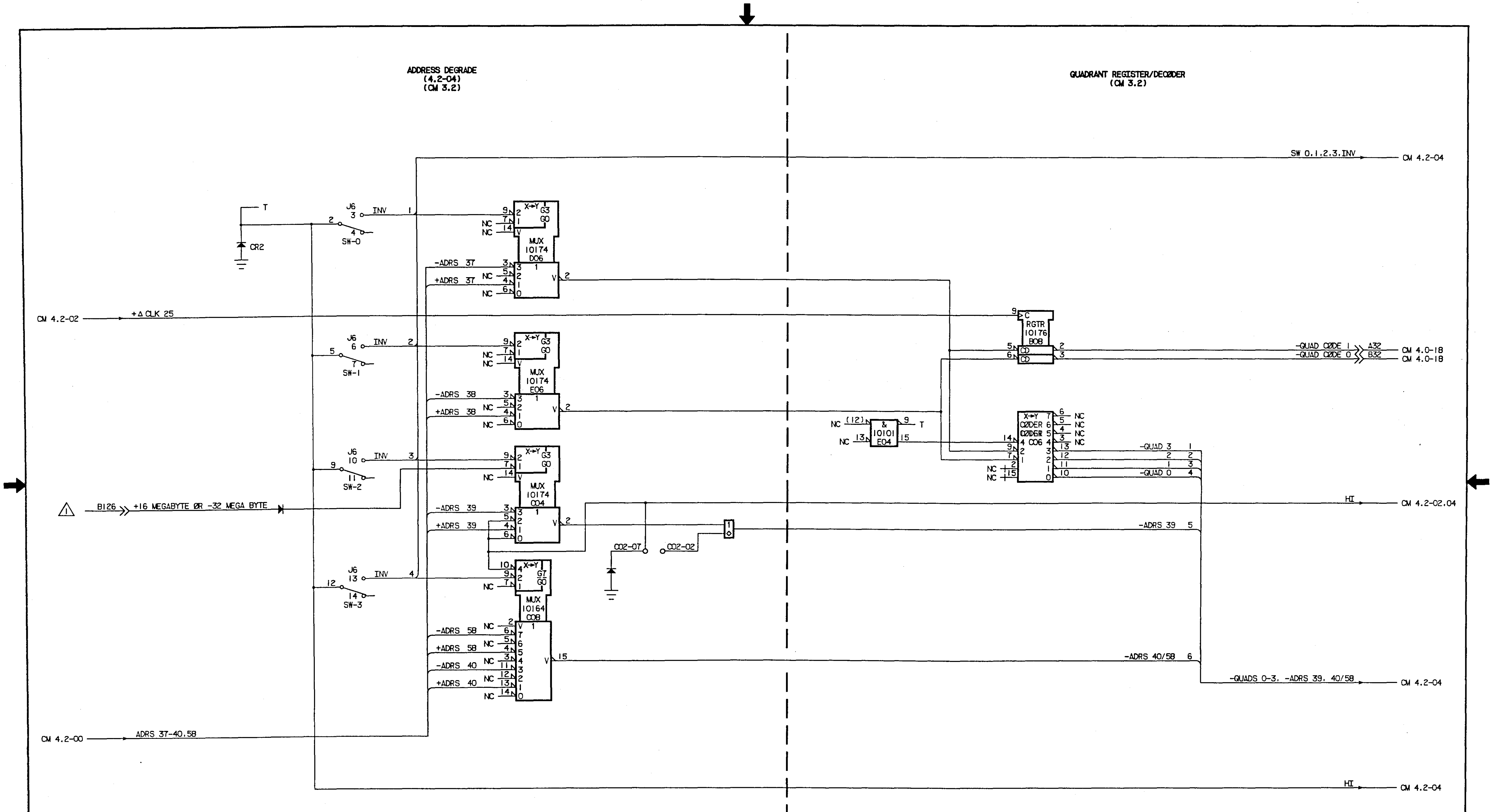
CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CM 3.0
CM BANKS 0-7 ADDRESS
ADDRESS PARITY CHECKER, CLØCK
RECEIVER AND DELAY NETWØRK
3GTH,B13
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.2-02	18-35



NOTE:

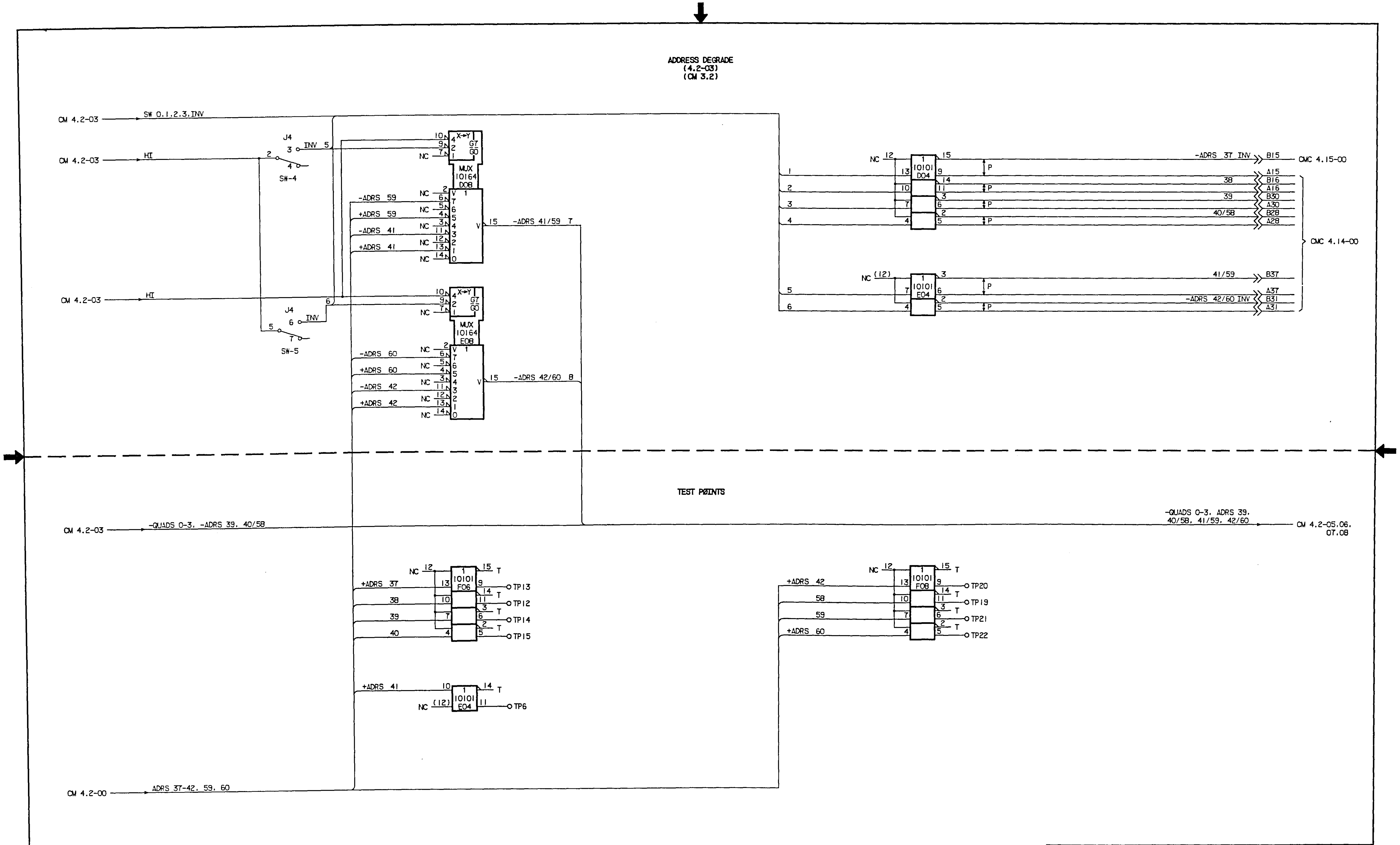
⚠ 16 MEGA BYTE = GROUND FROM BACK PANEL.
32 MEGA BYTE = OPEN.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM-CM 3.2
CM BANKS 0-7 ADDRESS
ADDRESS DEGRADE.
QUADRANT REGISTER/DECODER
3GTH:B13
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.2-03	18-36



CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CM 3.2
CM BANKS 0-7 ADDRESS
ADDRESS DEGRADE, TEST PØINTS

3GTH;813

AD112-C

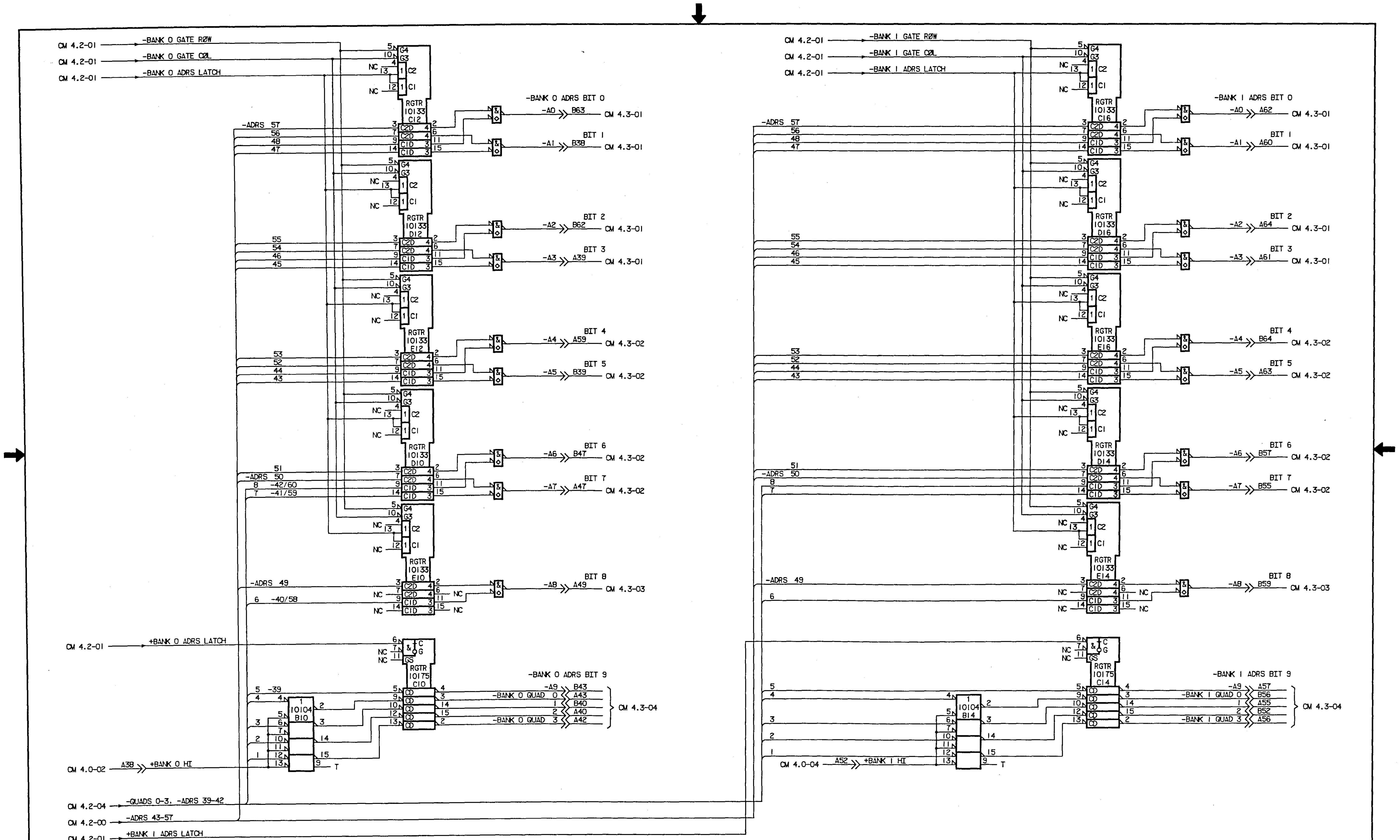
CODE IDENT

DWG NO 60458190

REV J

SHEET CM 4.2-04

PAGE 18-37



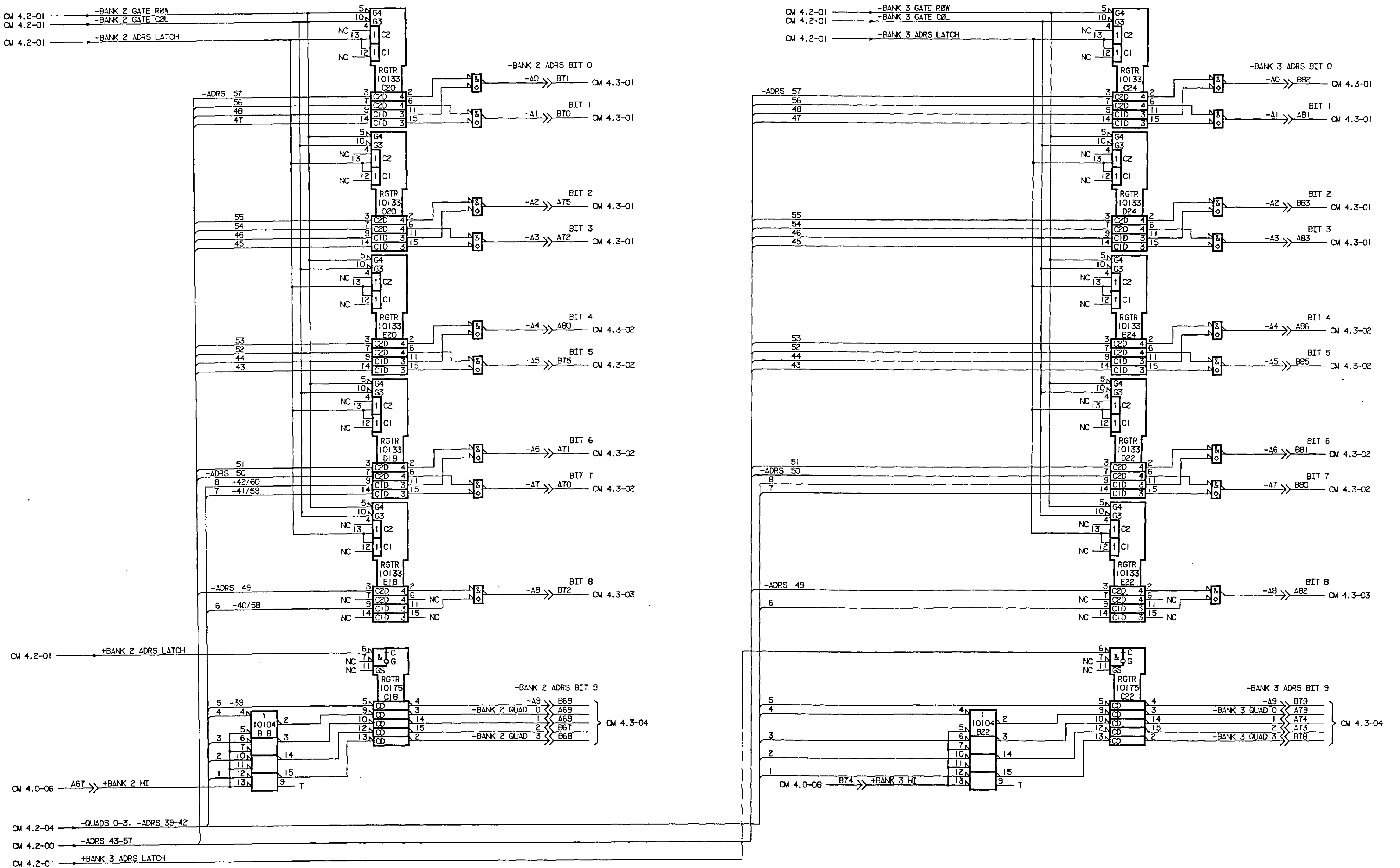
CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CM 3.2
CM BANKS 0 AND 1 ADDRESS
ADDRESS REGISTERS (4.2-06,07,08)

3GTH,B13 AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.2-05	18-38

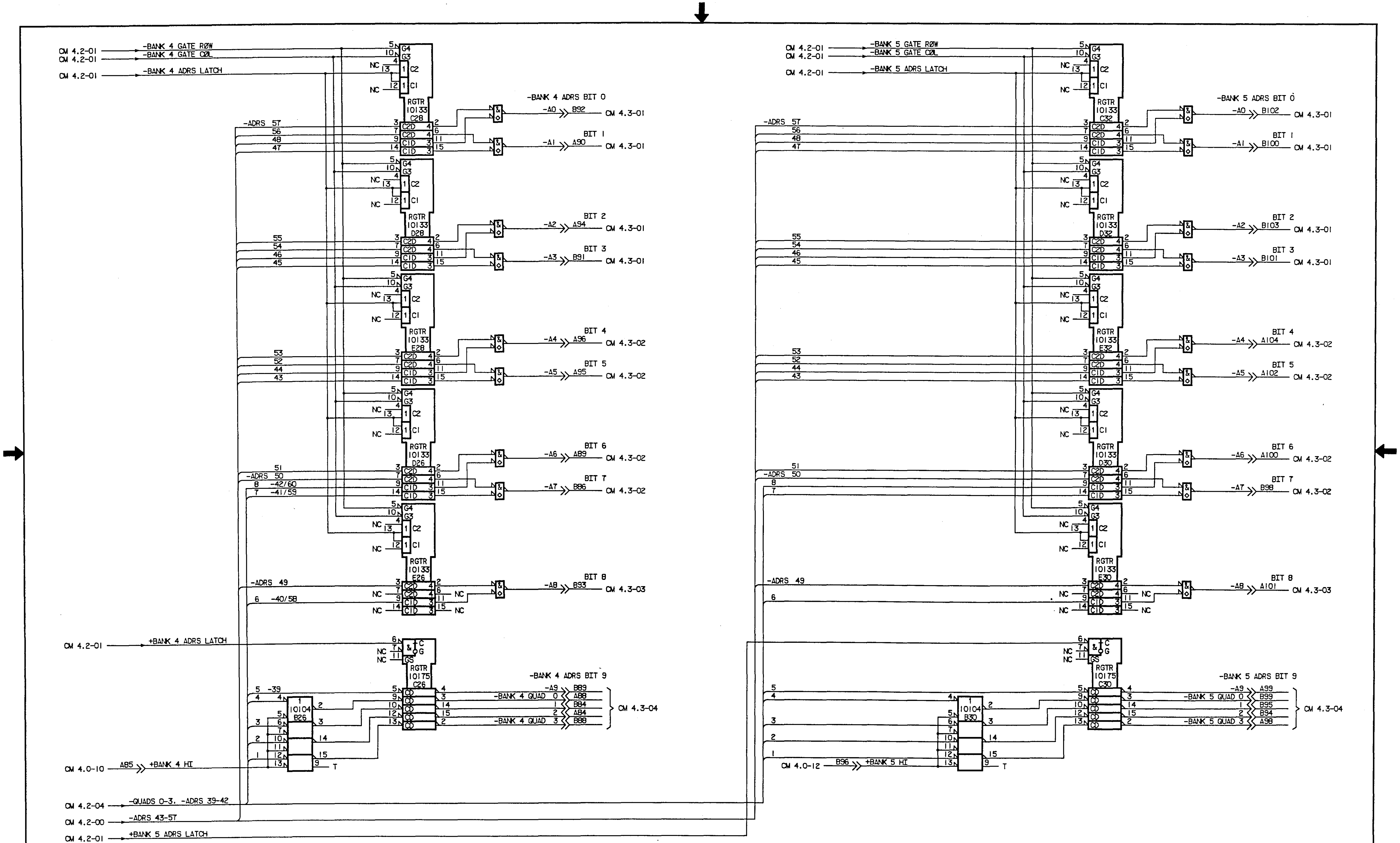


CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CM 3.2
CM BANKS 2 AND 3 ADDRESS
ADDRESS REGISTERS (4.2-05.07.08)

3GTH:B13
AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CM 4.2-06
PAGE 18-39



CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

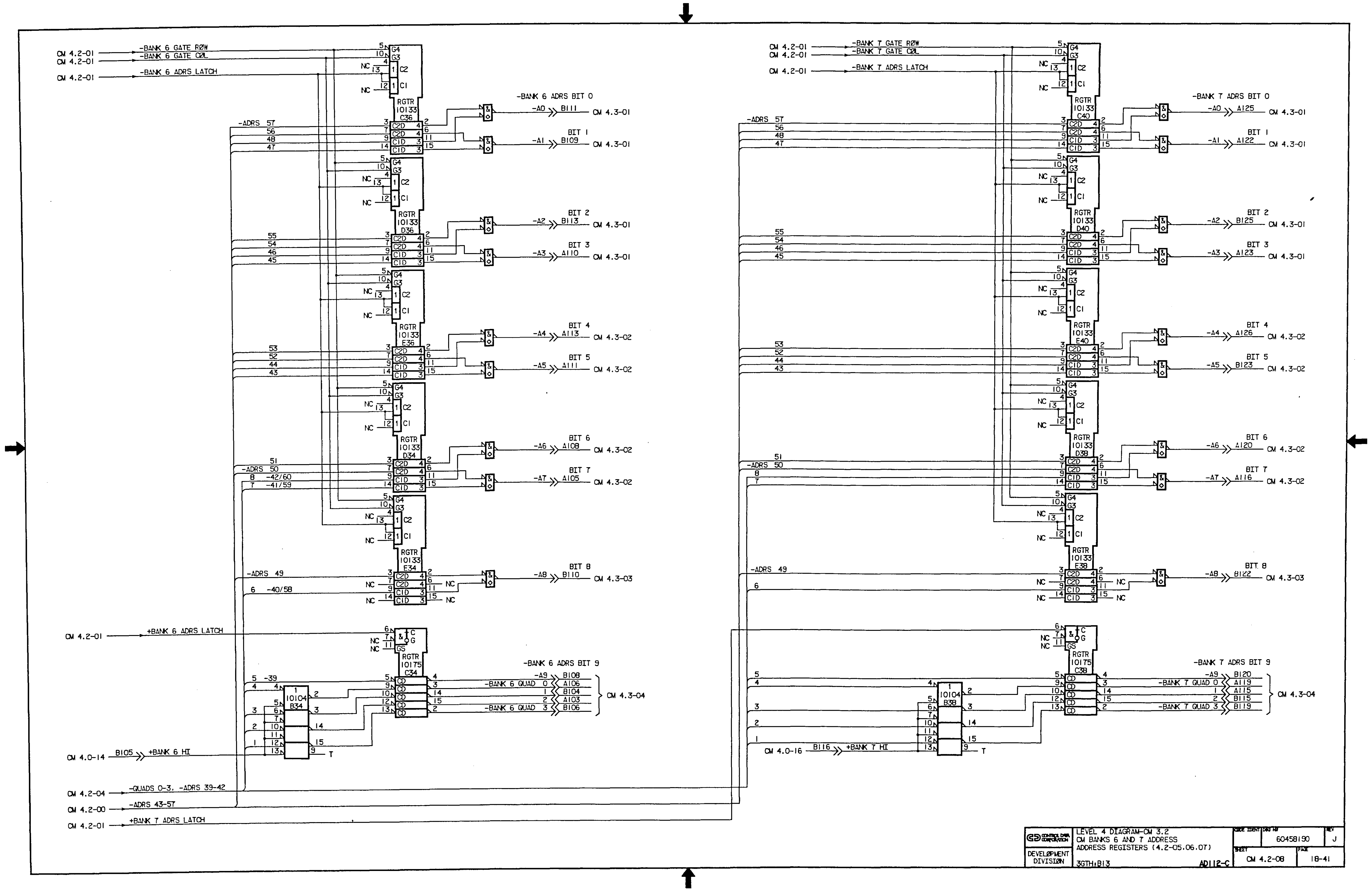
LEVEL 4 DIAGRAM-CM 3.2
CM BANKS 4 AND 5 ADDRESS
ADDRESS REGISTERS (4.2-05.06.08)

3GTH:B13

AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.2-07	18-40



CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM-CM 3.2
CM BANKS 6 AND 7 ADDRESS
ADDRESS REGISTERS (4.2-05.06.07)
3GTH;B13
AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CM 4.2-08
PAGE 18-41

TEST POINT		TEST POINT	
1	GROUND	27	+PAR 05
2	+ADRS 52	28	GROUND
3	+ADRS 51	29	-CLOCK
4	+ADRS 50	30	+ADRS 34
5	+ADRS 55	31	+PAR 07
6	+ADRS 41	32	
7	+ADRS 54	33	
8	+ADRS 53	34	+ADRS 43
9	+PAR 04	35	
10	+ADRS 44	36	
11	+ADRS 57	37	
12	+ADRS 38	38	
13	+ADRS 37	39	
14	+ADRS 39	40	+ADRS 35
15	+ADRS 40	41	+ADRS 36
16	+ADRS 56	42	
17	+PAR 06	43	
18	+ADRS 47	44	
19	+ADRS 58	45	
20	+ADRS 42	46	
21	+ADRS 59	47	
22	+ADRS 60	48	
23	+ADRS 46	49	
24	+ADRS 45	50	
25	+ADRS 49	51	
26	+ADRS 48	52	
		53	GROUND

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 TEXT POINT CHART
CM BANKS 0-7 ADDRESS
SUPPLEMENTAL WIRING INFORMATION

3GTH,B13
AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CM 4.2-09
PAGE 18-42

CONNECTOR PIN ASSIGNMENTS

SIGNAL NAME	B PIN NO	A PIN NO	SIGNAL NAME
-5.2 V	B1	A1	-5.2 V
-5.2 V	B2	A2	-5.2 V
QUAD X	B3	A3	GND
△1 T	B4	A4	GND
GND	B5	A5	GND
T	B6	A6	T
-2.2 V	B7	A7	-2.2 V
-2.2 V	B8	A8	-2.2 V
T	B9	A9	T
DATA BIT 0	B10	A10	T
GND	B11	A11	GND
BIT 1	B12	A12	T
BIT 2	B13	A13	T
BIT 3	B14	A14	T
GND	B15	A15	GND
BIT 4	B16	A16	T
BIT 5	B17	A17	T
BIT 6	B18	A18	T
GND	B19	A19	GND
BIT 7	B20	A20	T
BIT 8	B21	A21	T
BIT 9	B22	A22	T
GND	B23	A23	GND
BIT 10	B24	A24	T
BIT 11	B25	A25	T
BIT 12	B26	A26	T
GND	B27	A27	GND
BIT 13	B28	A28	T
BIT 14	B29	A29	T
BIT 15	B30	A30	T
GND	B31	A31	GND
BIT 16	B32	A32	T
BIT 17	B33	A33	T
BIT 18	B34	A34	T
GND	B35	A35	GND
BIT 19	B36	A36	T
BIT 20	B37	A37	T
BIT 21	B38	A38	T
GND	B39	A39	GND
BIT 22	B40	A40	T
BIT 23	B41	A41	T
BIT 24	B42	A42	T
GND	B43	A43	GND
BIT 25	B44	A44	T
BIT 26	B45	A45	T
BIT 27	B46	A46	T
GND	B47	A47	GND
BIT 28	B48	A48	T
BIT 29	B49	A49	T
BIT 30	B50	A50	T
GND	B51	A51	GND
BIT 31	B52	A52	T
BIT 32	B53	A53	T
BIT 33	B54	A54	T
GND	B55	A55	GND
BIT 34	B56	A56	T
BIT 35	B57	A57	T
BIT 36	B58	A58	T
GND	B59	A59	GND
BIT 37	B60	A60	T
+5 V	B61	A61	+5 V
BIT 38	B62	A62	T
GND	B63	A63	GND
BIT 39	B64	A64	T
NC	B65	A65	NC

SIGNAL NAME	B PIN NO	A PIN NO	SIGNAL NAME
NC	B66	A66	NC
BIT 40	B67	A67	T △1
GND	B68	A68	GND
BIT 41	B69	A69	T
+5 V	B70	A70	+5 V
BIT 42	B71	A71	T
GND	B72	A72	GND
BIT 43	B73	A73	T
BIT 44	B74	A74	T
BIT 45	B75	A75	T
GND	B76	A76	GND
BIT 46	B77	A77	T
BIT 47	B78	A78	T
BIT 48	B79	A79	T
GND	B80	A80	GND
BIT 49	B81	A81	T
BIT 50	B82	A82	T
BIT 51	B83	A83	T
GND	B84	A84	GND
BIT 52	B85	A85	T
BIT 53	B86	A86	T
BIT 54	B87	A87	T
GND	B88	A88	GND
BIT 55	B89	A89	T
BIT 56	B90	A90	T
BIT 57	B91	A91	T
GND	B92	A92	GND
BIT 58	B93	A93	T
BIT 59	B94	A94	T
BIT 60	B95	A95	T
GND	B96	A96	GND
BIT 61	B97	A97	T
BIT 62	B98	A98	T
BIT 63	B99	A99	T
GND	B100	A100	GND
BIT 64	B101	A101	T
BIT 65	B102	A102	T
BIT 66	B103	A103	T
GND	B104	A104	GND
BIT 67	B105	A105	T
BIT 68	B106	A106	T
BIT 69	B107	A107	T
GND	B108	A108	GND
BIT 70	B109	A109	T
BIT 71	B110	A110	T
A1	B111	A111	A0
GND	B112	A112	GND
A3	B113	A113	A2
A5	B114	A114	A4
T	B115	A115	A8
GND	B116	A116	GND
REFRESH	B117	A117	A6
T	B118	A118	WRITE
RAS	B119	A119	CAS
GND	B120	A120	GND
A9	B121	A121	DATA GATE
T	B122	A122	A7
-2.2 V	B123	A123	-2.2 V
-2.2 V	B124	A124	-2.2 V
T	B125	A125	T
GND	B126	A126	GND
T	B127	A127	T
T	B128	A128	T
-5.2 V	B129	A129	-5.2 V
-5.2 V	B130	A130	-5.2 V

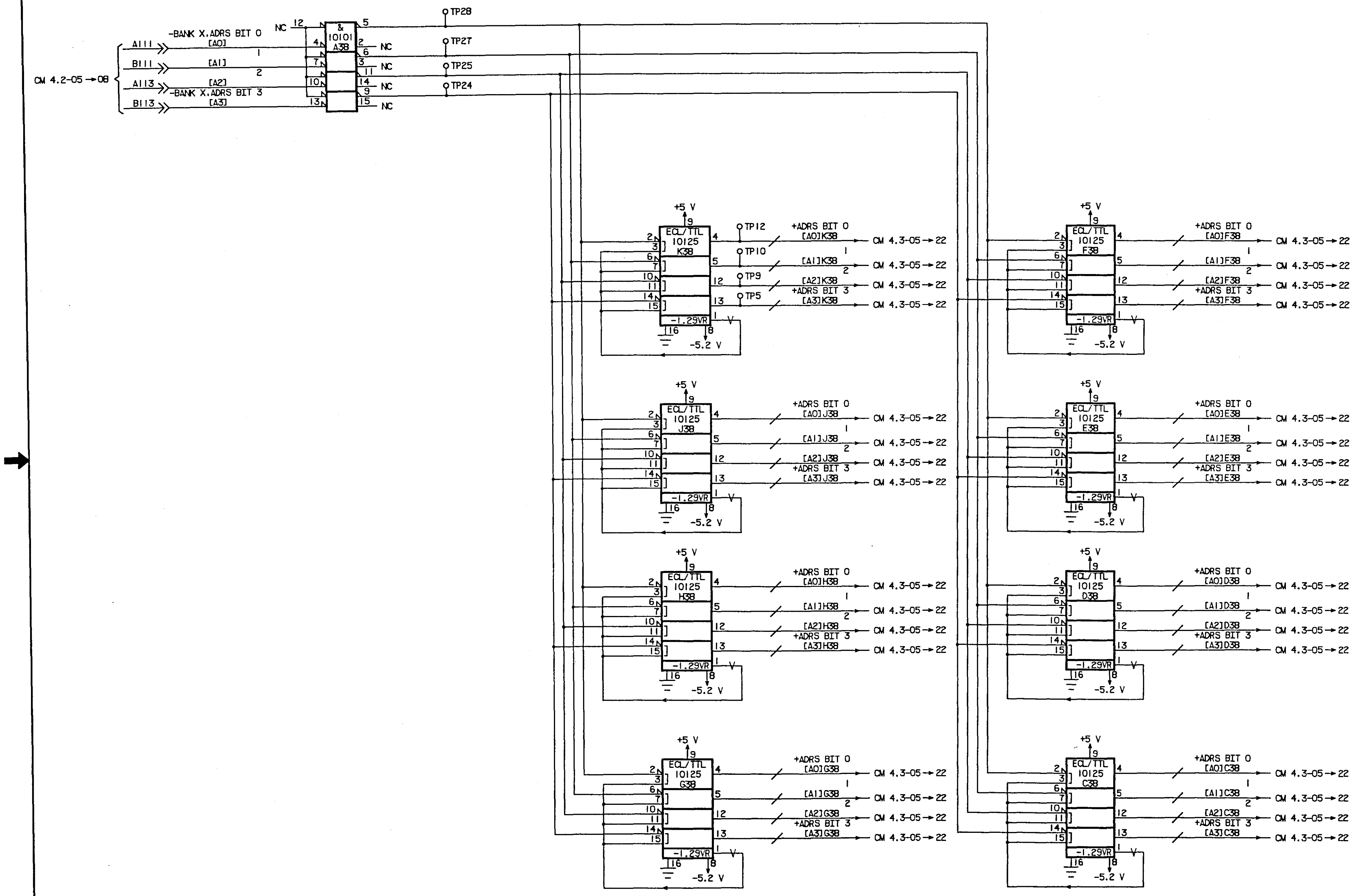
NOTES:

△1 T DESIGNATES A CONNECTION TO A 100 Ω TERMINATION TO -2.2 V.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM
MEMORY
CONNECTOR CHART
3HBH:A01-A08,A15-A22,
B01-B08,B15-B22
AD112-C

CODE IDENT
DWG NO 60458190
REV J
SHEET CM 4.3-00
PAGE 18-43



CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM
MEMØRY

3HBH: A01-A08, A15-A22,
B01-B08, B15-B22

CM 3.4

AD112-C

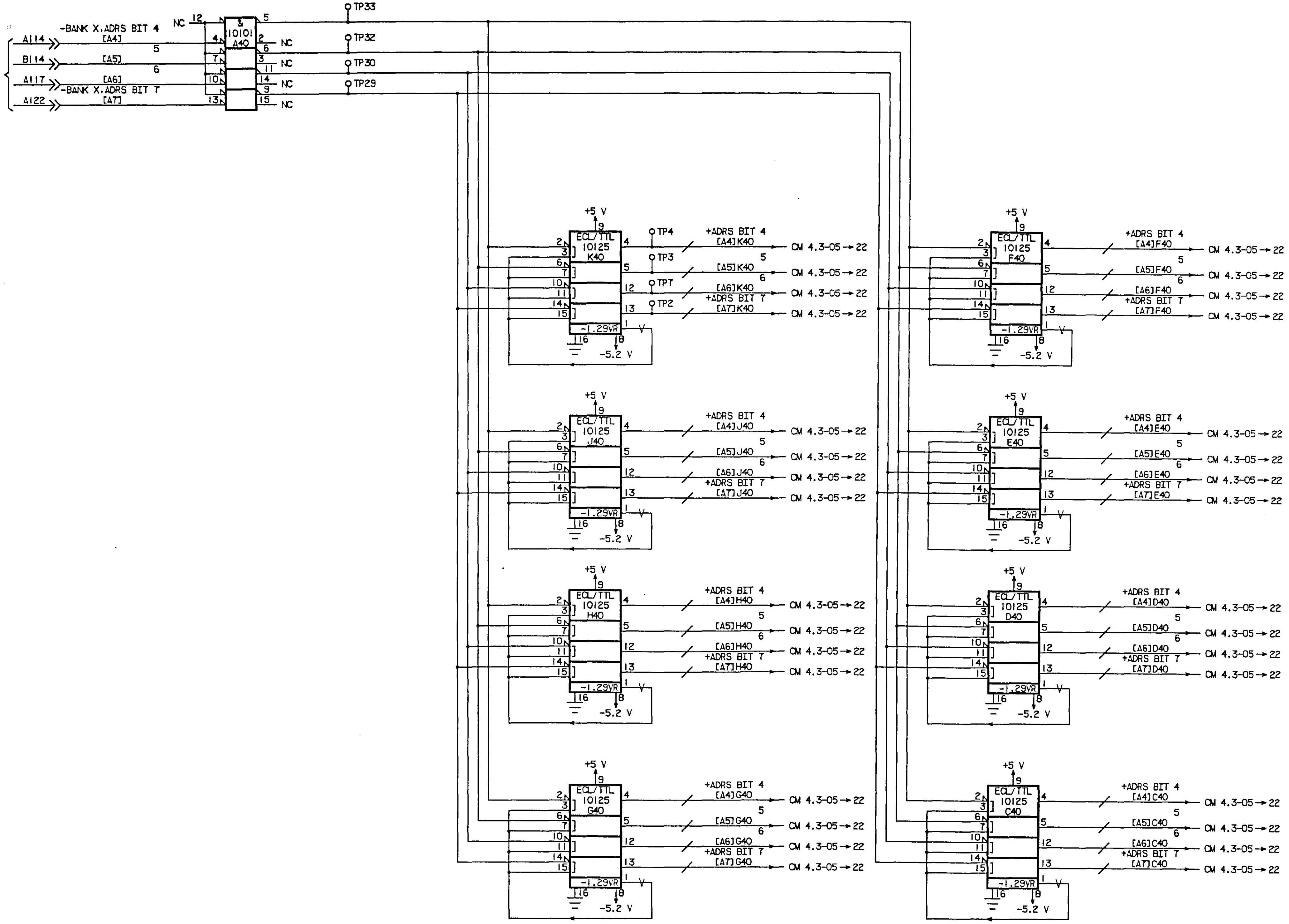
CAGE IDENT

DWG NO 60458190

REV J

SHEET CM 4.3-01

PAGE 18-44



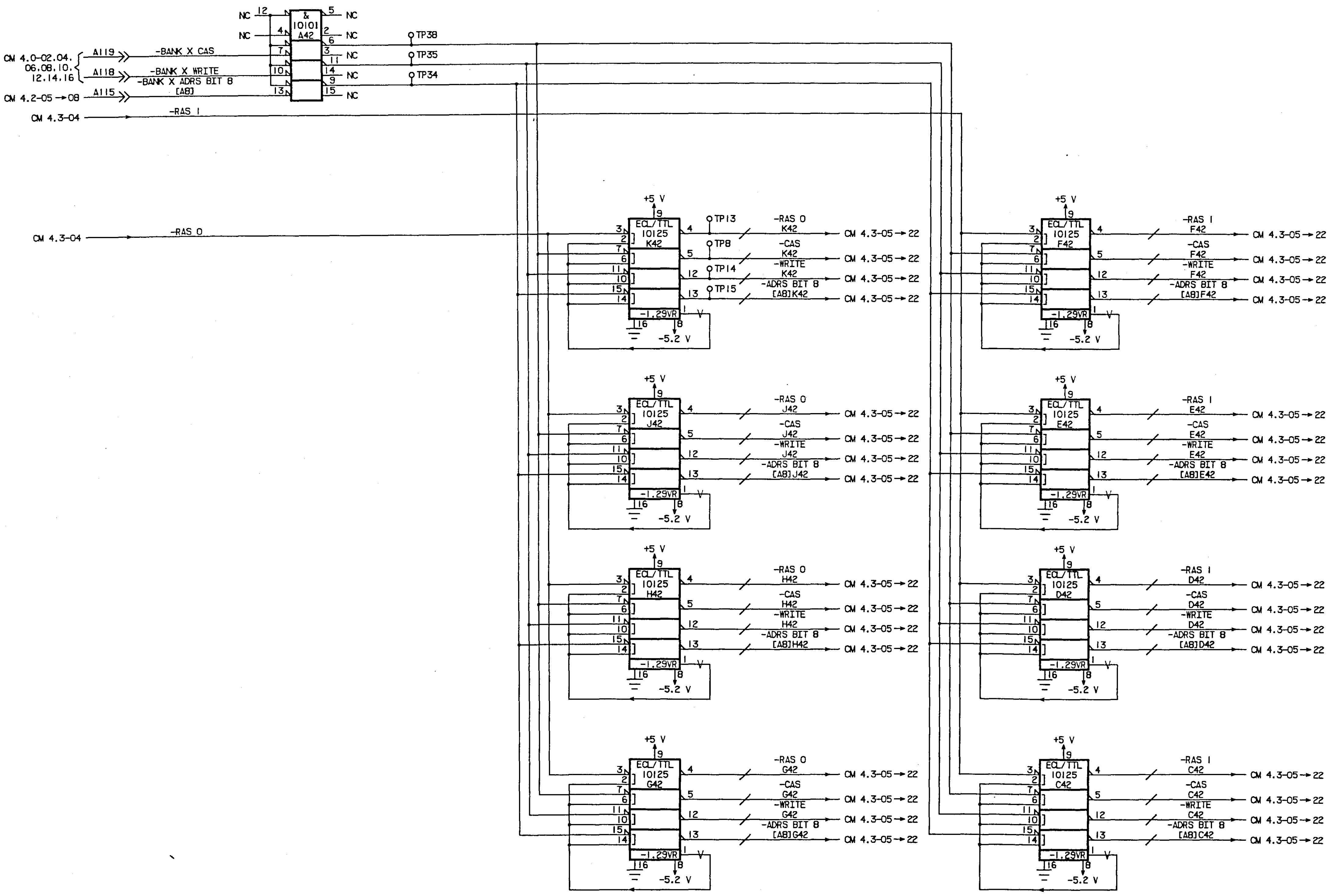
CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM
MEMORY
3HBH:A01-A08,A15-A22,
B01-B08,B15-B22

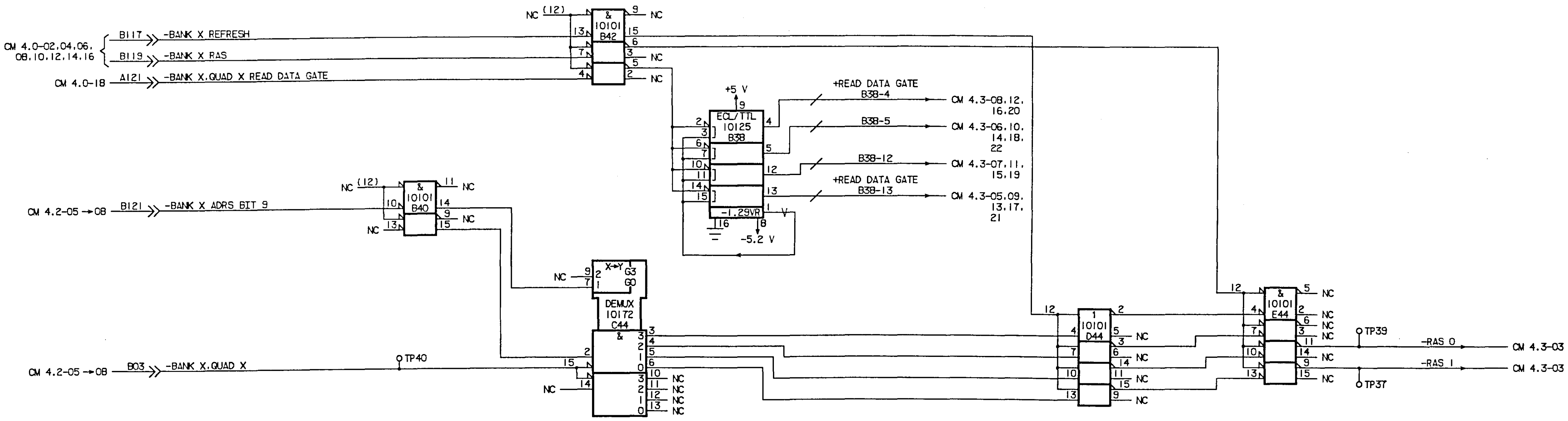
CM 3.4
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

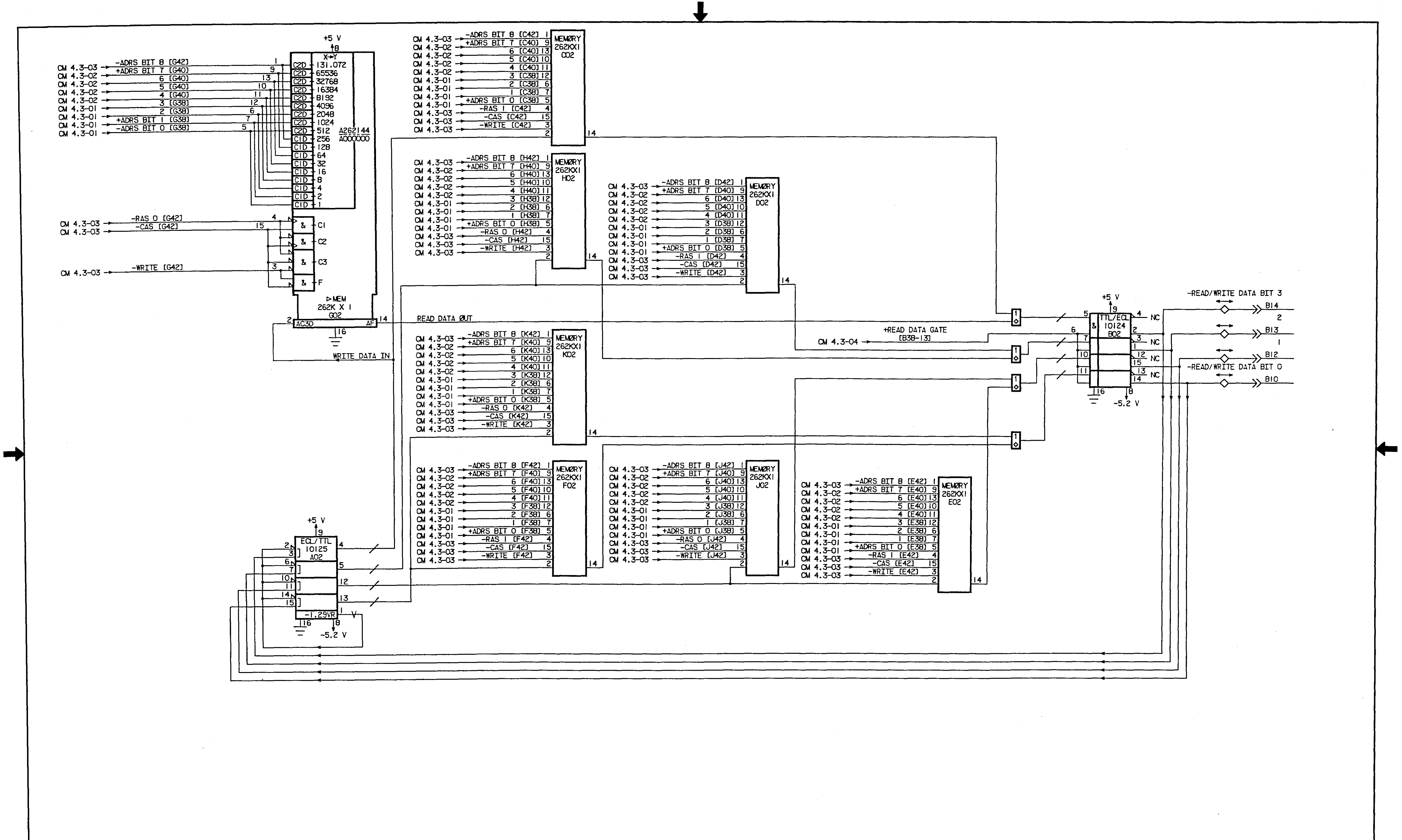
SHEET	PAGE
CM 4.3-02	18-45



CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM MEMØRY	CM 3.4	CODE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	3HBH:A01-A08.A15-A22. B01-B08.B15-B22	AD112-C	SHEET CM 4.3-03	PAGE 18-46	



CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM MEMØRY	CM 3.4	CODE IDENT / DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	3HBH: A01-A08, A15-A22, B01-B08, B15-B22	AD112-C	SHEET CM 4.3-04	PAGE 18-47



CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM
MEMORY

CM 3.4

3HBH:A01-A08,A15-A22,
B01-B08,B15-B22

AD112-C

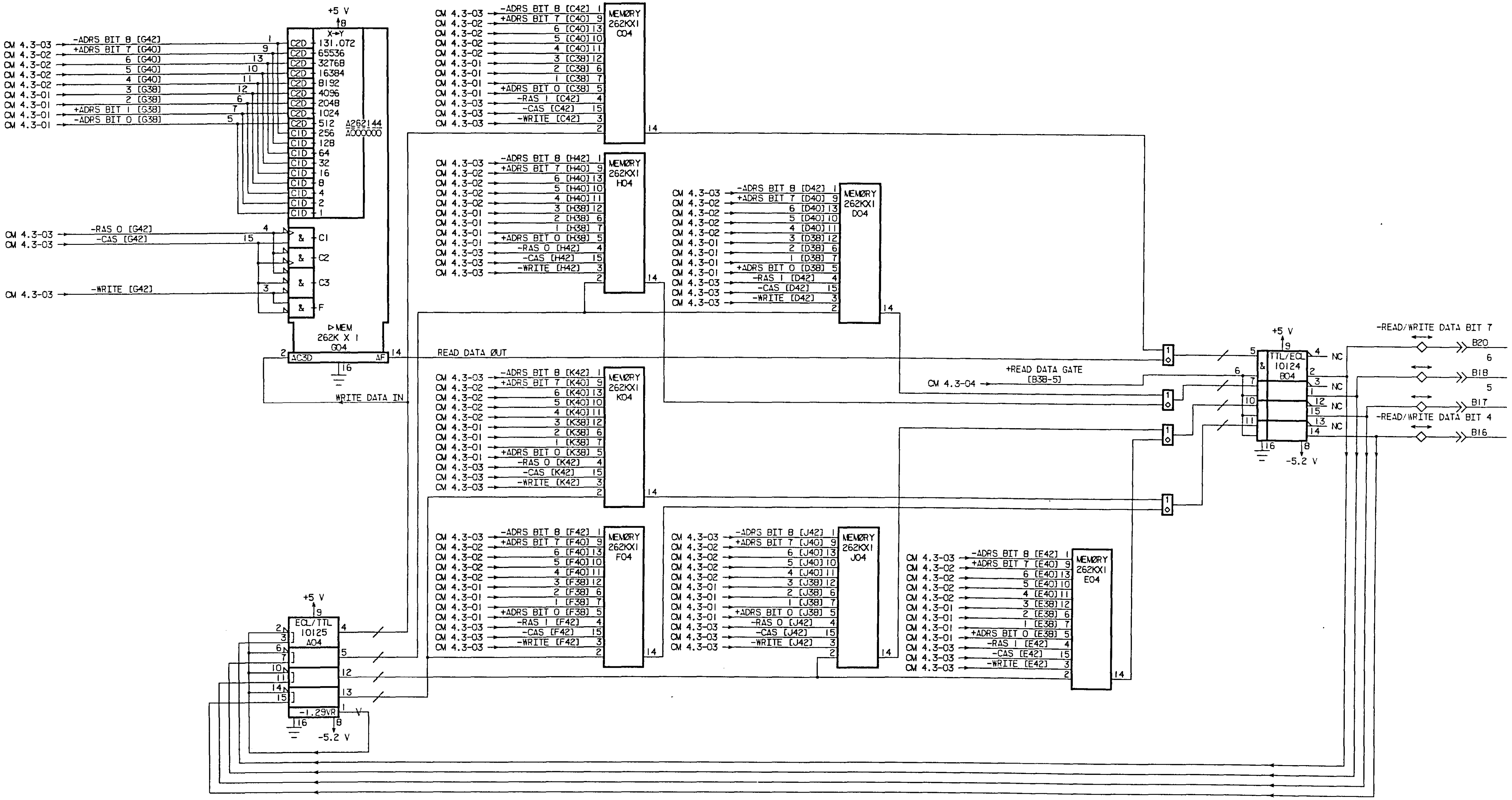
CAGE IDENT

DWG NO 60458190

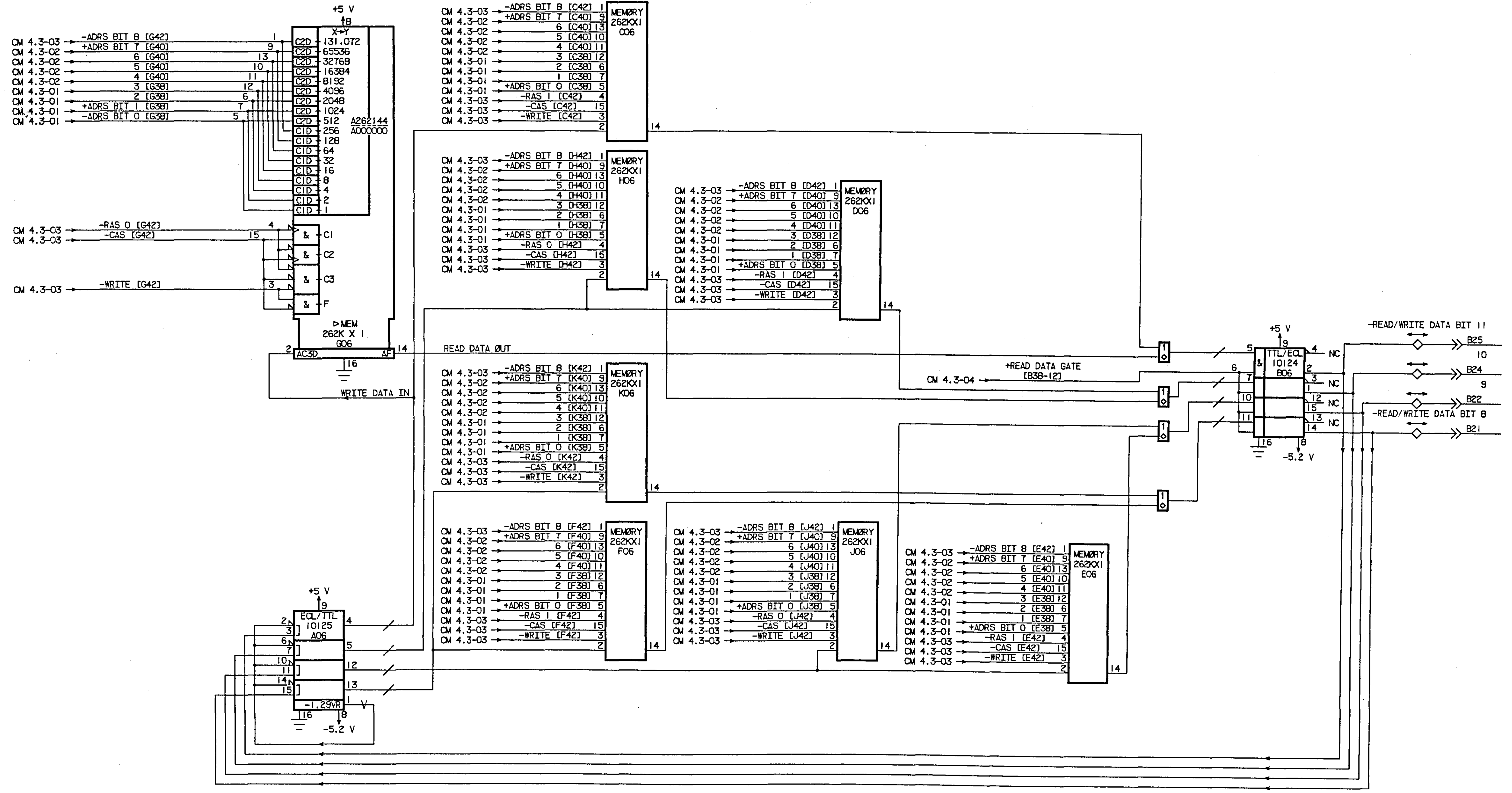
REV J

SHEET CM 4.3-05

PAGE 18-48



	LEVEL 4 DIAGRAM MEMØRY	CM 3.4	CAGE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	3HBH:A01-A08,A15-A22, B01-B08,B15-B22	AD112-C	SHEET CM 4.3-06	PAGE 18-49	



CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM
MEMORY

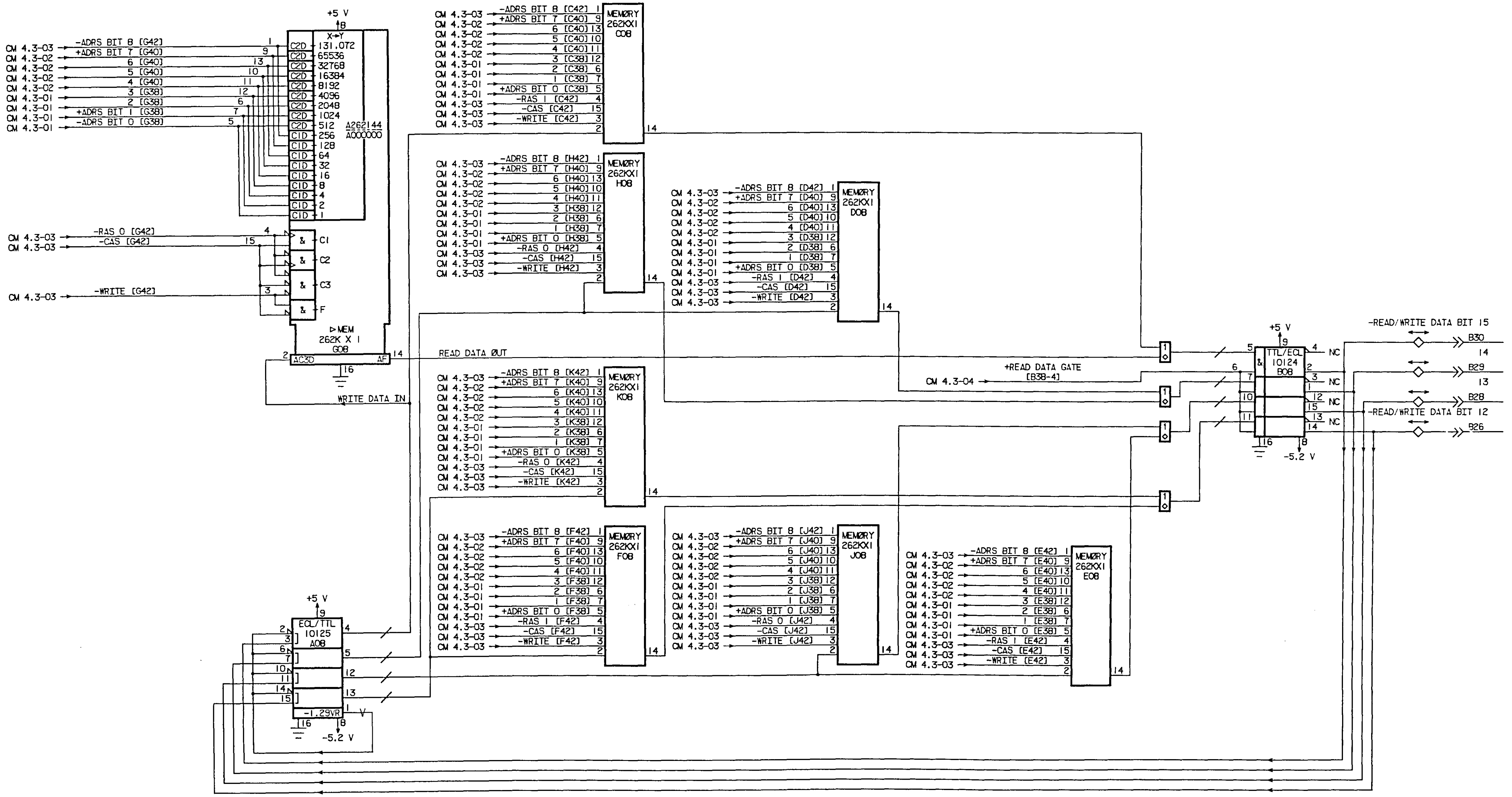
3HBH: A01-A08, A15-A22,
B01-B08, B15-B22

CM 3.4

AD112-C

CAGE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.3-07	18-50



CONTROL DATA CORPORATION

LEVEL 4 DIAGRAM
MEMORY

CM 3.4

CODE IDENT | DWG NO 60458190 | REV J

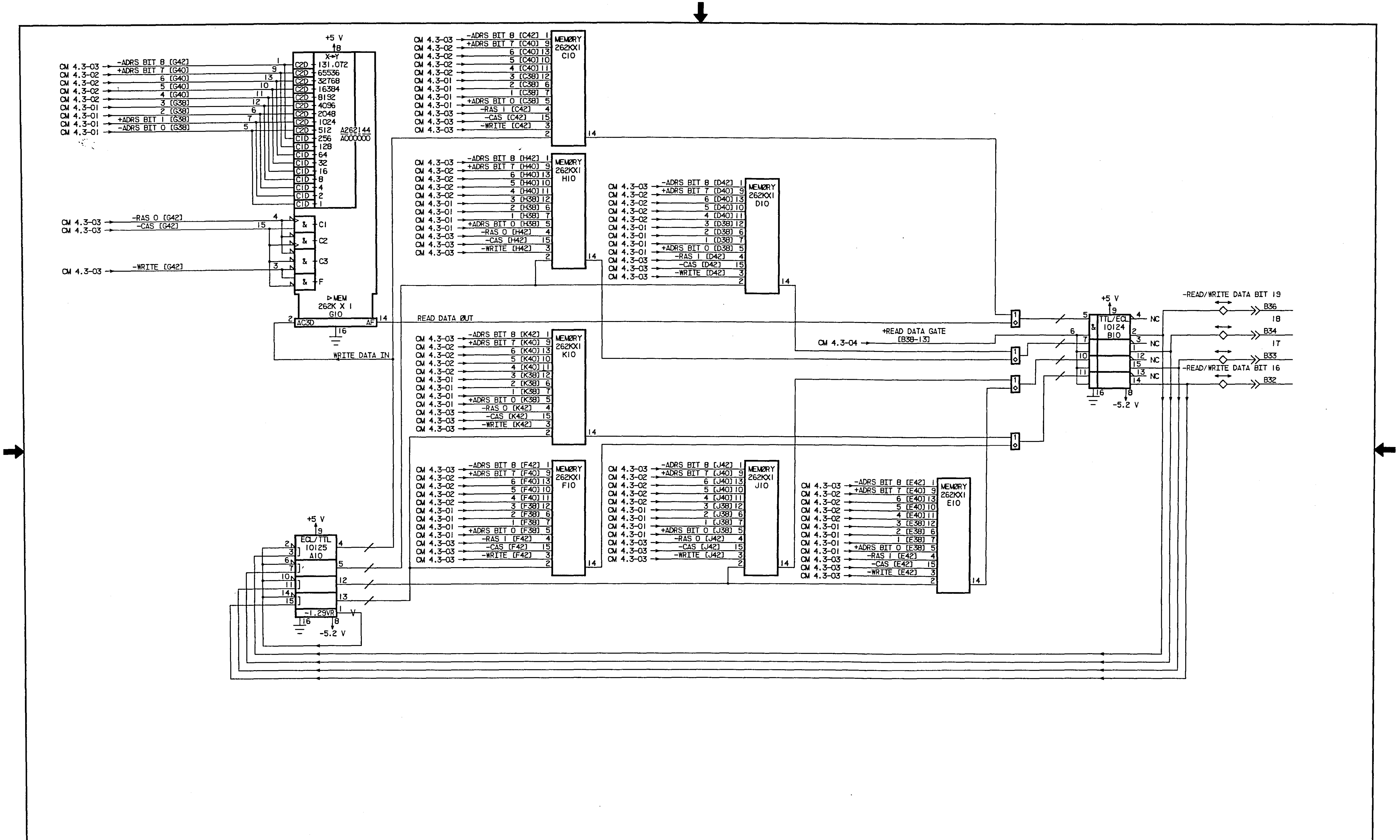
DEVELOPMENT DIVISION

3HBH:A01-A08,A15-A22,
B01-B08,B15-B22

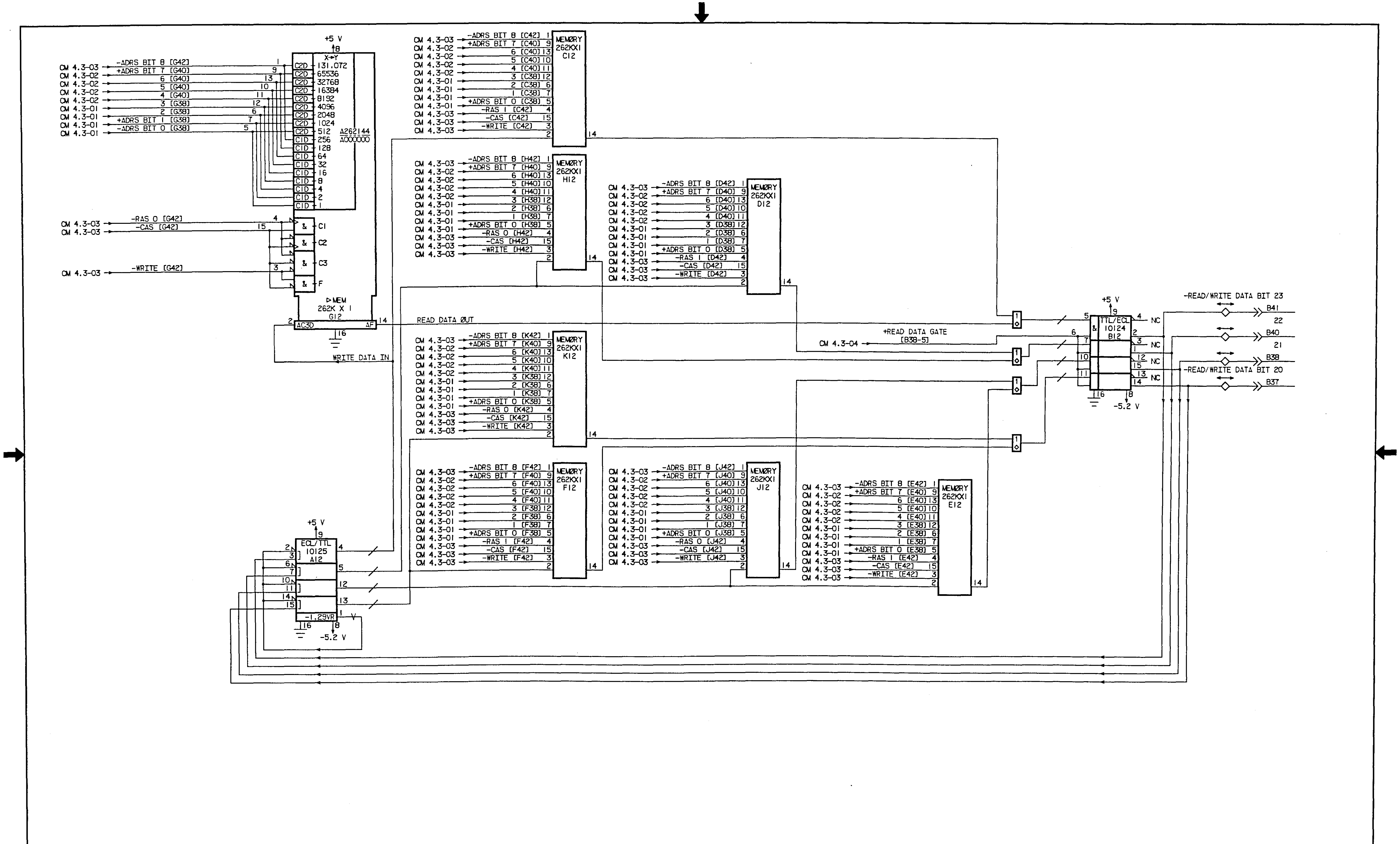
AD112-C

SHEET CM 4.3-08

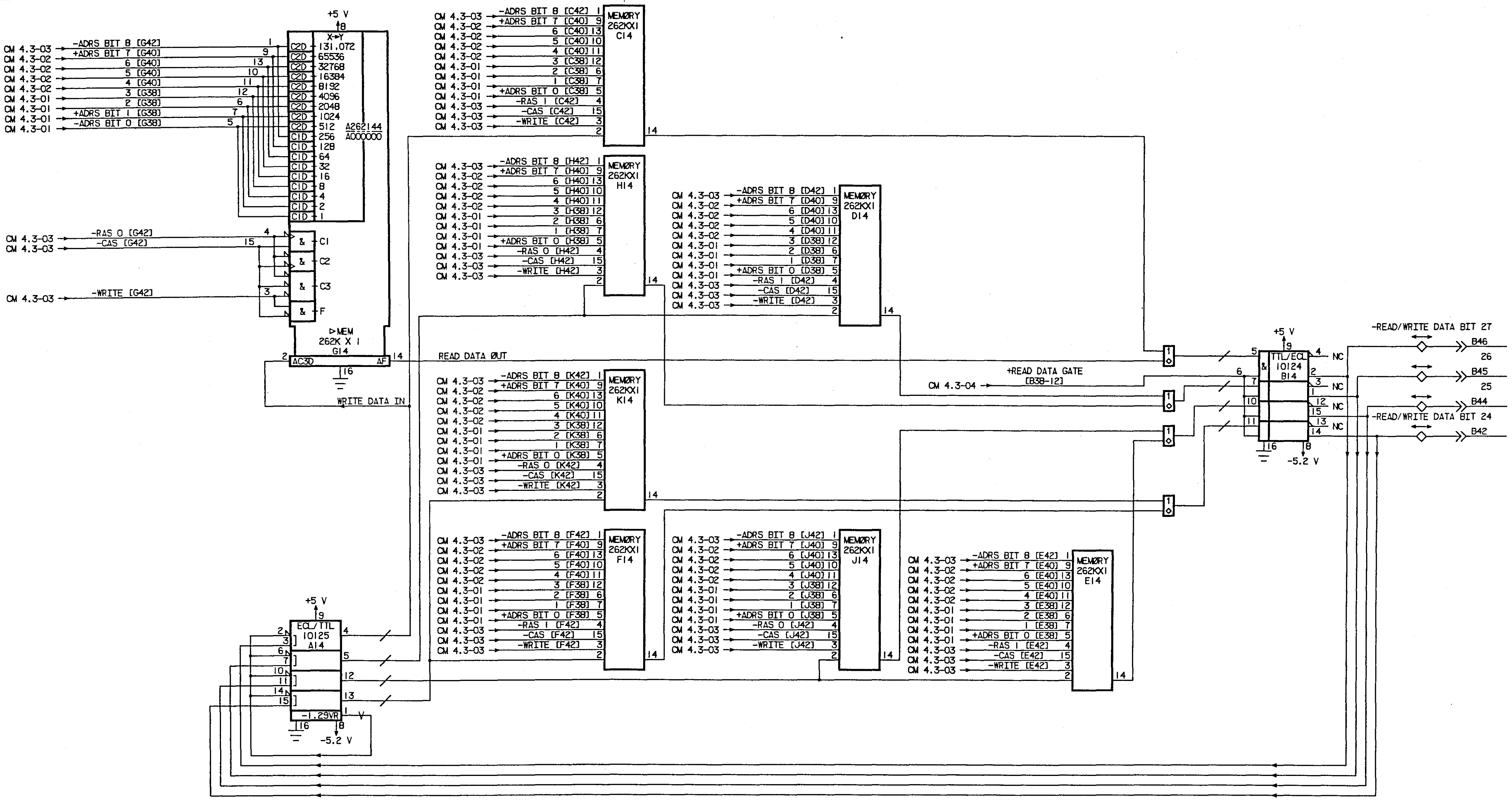
PAGE 18-51



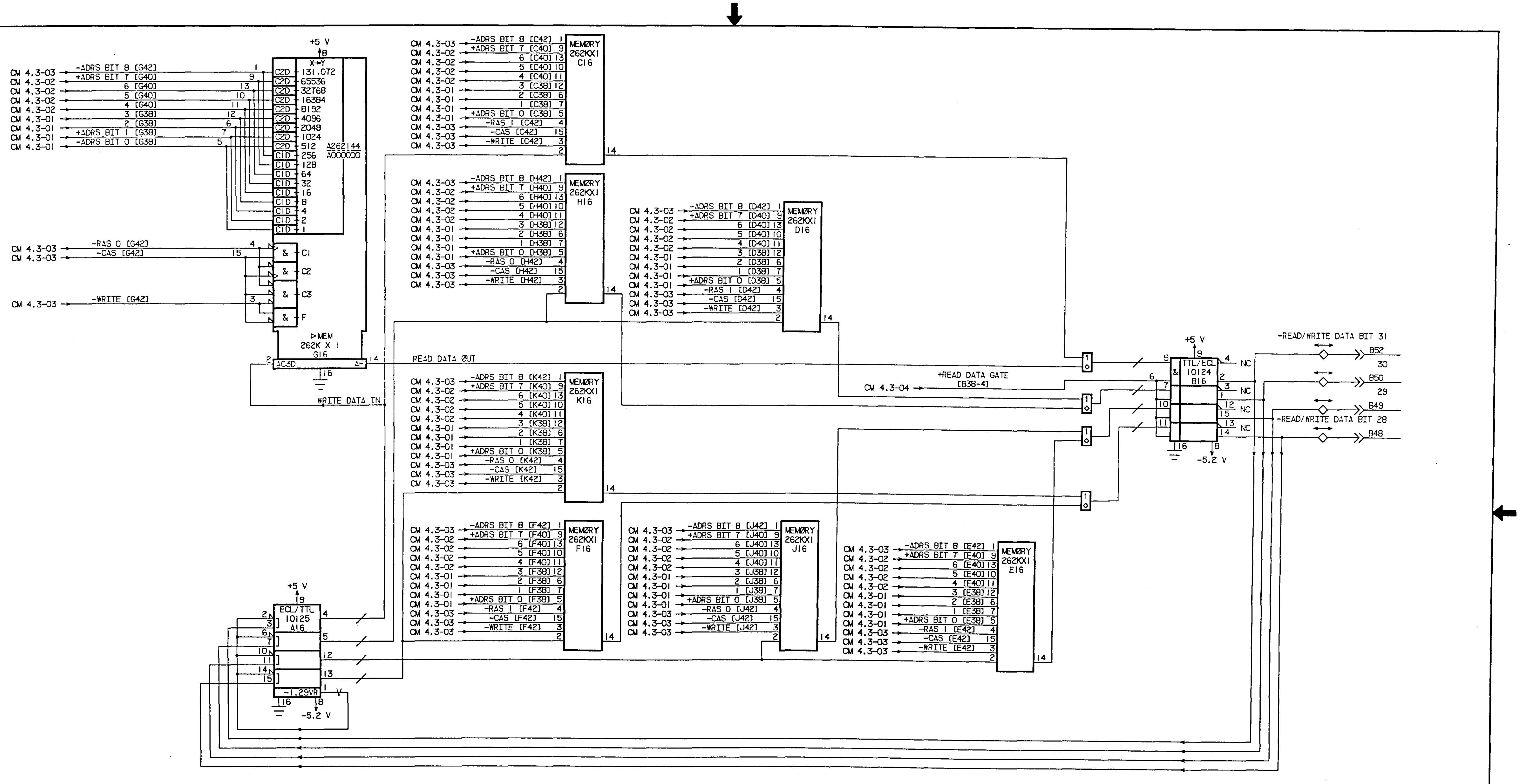
CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM MEMORY	CM 3.4	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION	3HBH: A01-A08, A15-A22, B01-B08, B15-B22	AD112-C	SHEET CM 4.3-09	PAGE 18-52	



CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM MEMØRY	CM 3.4	CODE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	3HBH:A01-A08,A15-A22, B01-B08,B15-B22	AD112-C	SHEET CM 4.3-10	PAGE 18-53	



CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM MEMORY	CM 3.4	CODE IDENT / DWG NO 60458190 / REV J
DEVELOPMENT DIVISION	3HBH;A01-A08,A15-A22, B01-B08,B15-B22	AD112-C	SHEET CM 4.3-11 / PAGE 18-54



CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM
MEMØRY

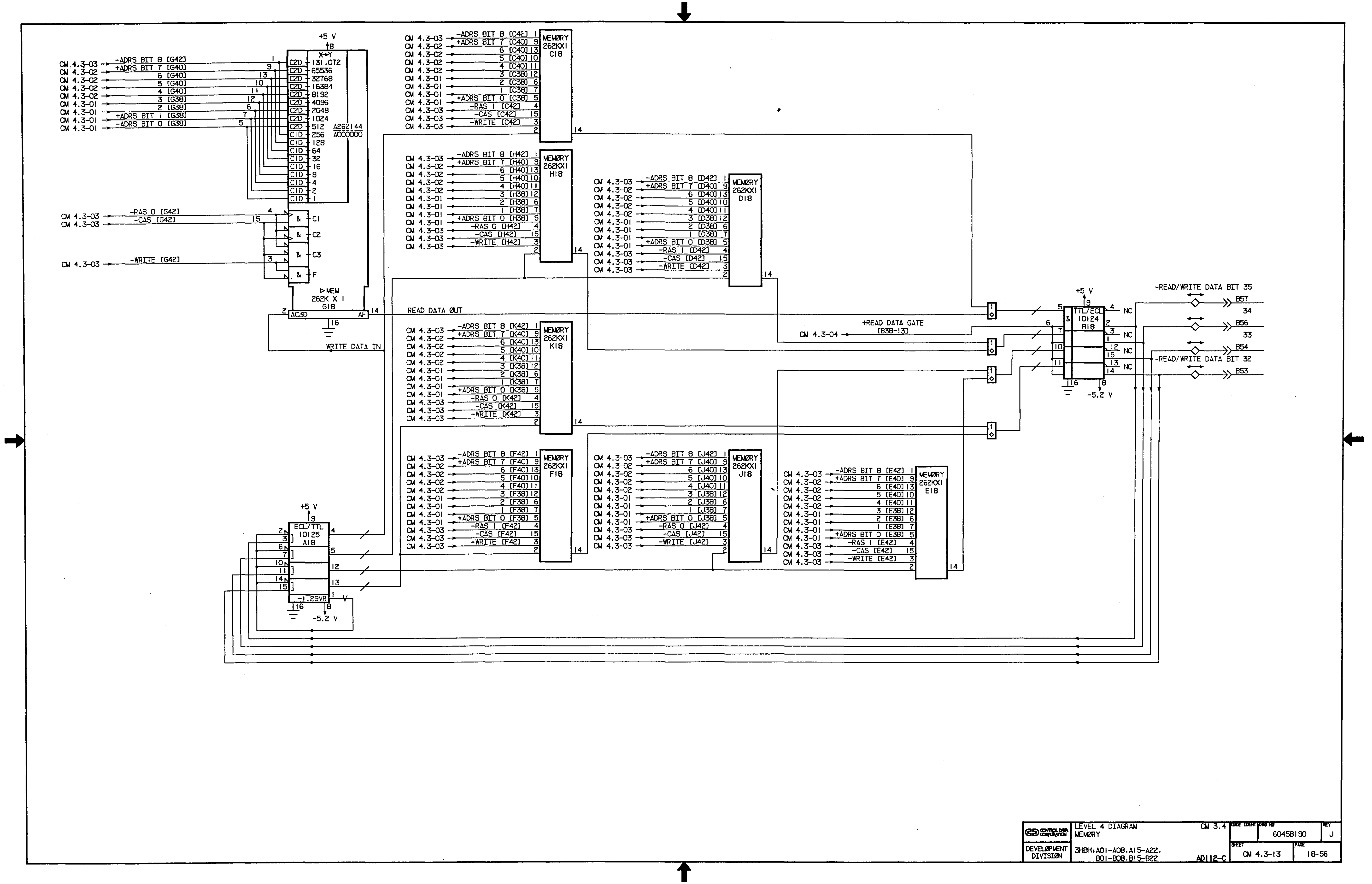
CM 3.4

3HBH, A01-A08, A15-A22,
B01-B08, B15-B22

AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.3-12	18-55



CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM
MEMORY

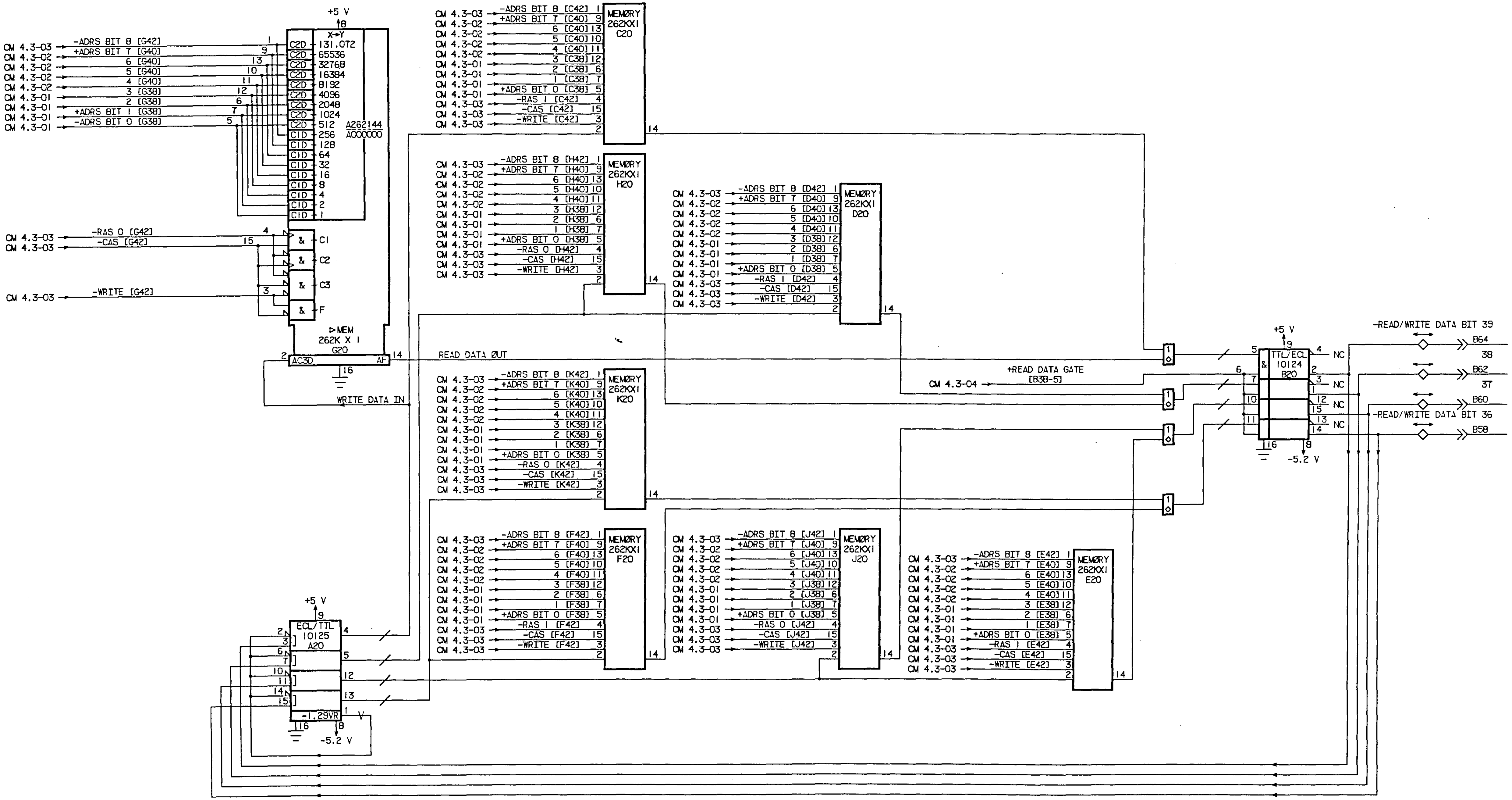
CM 3.4

3HBH;A01-A08,A15-A22,
B01-B08,B15-B22

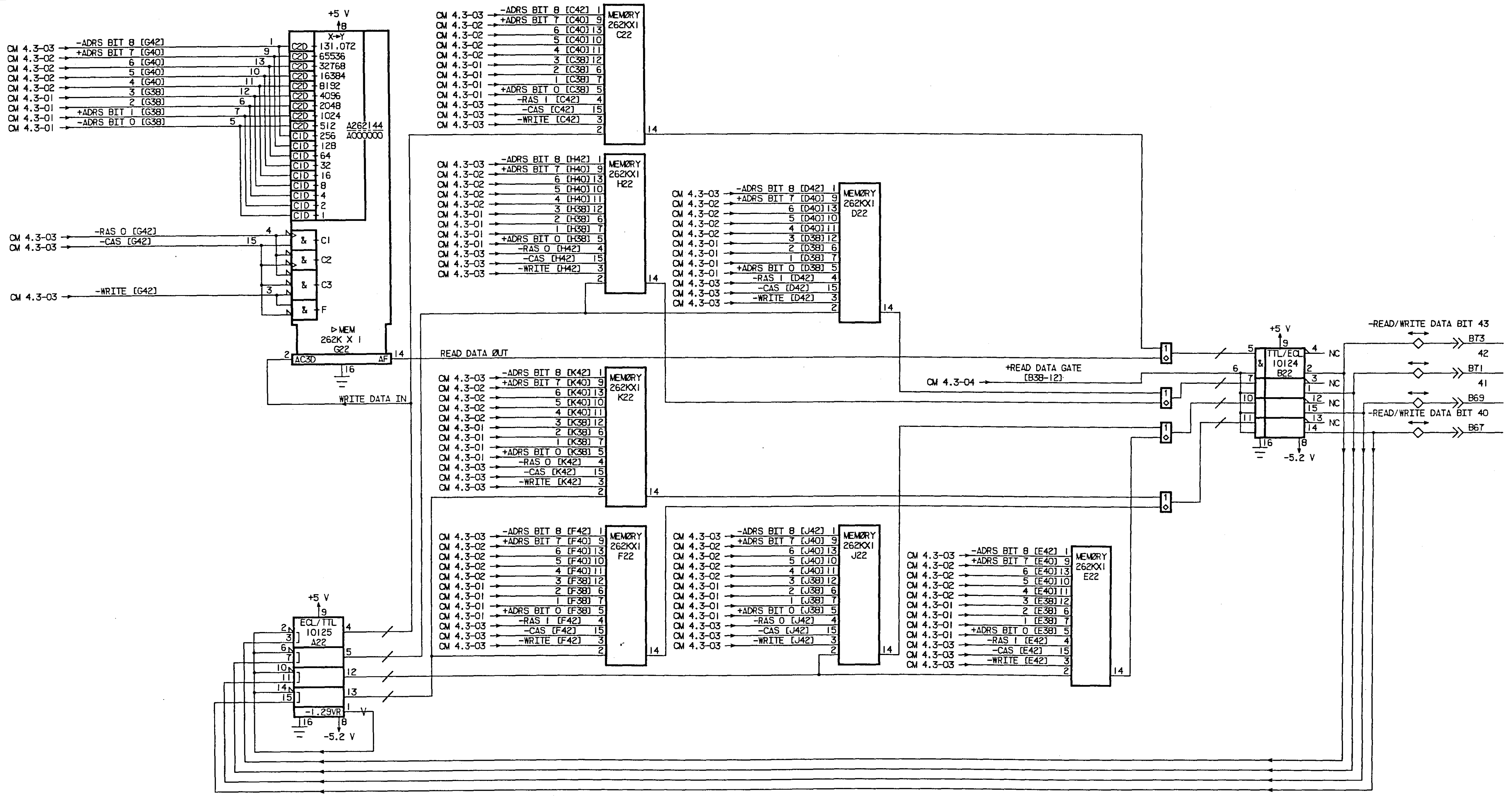
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CM 4.3-13	18-56



CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM MEMØRY	CM 3.4	CAGE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	3HBH;A01-A08,A15-A22, B01-B08,B15-B22	AD112-C	SHEET CM 4.3-14	PAGE 18-57



CONTROL DATA CORPORATION

DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM
MEMØRY

CM 3.4

3HBH;A01-A08,A15-A22,
B01-B08,B15-B22

AD112-C

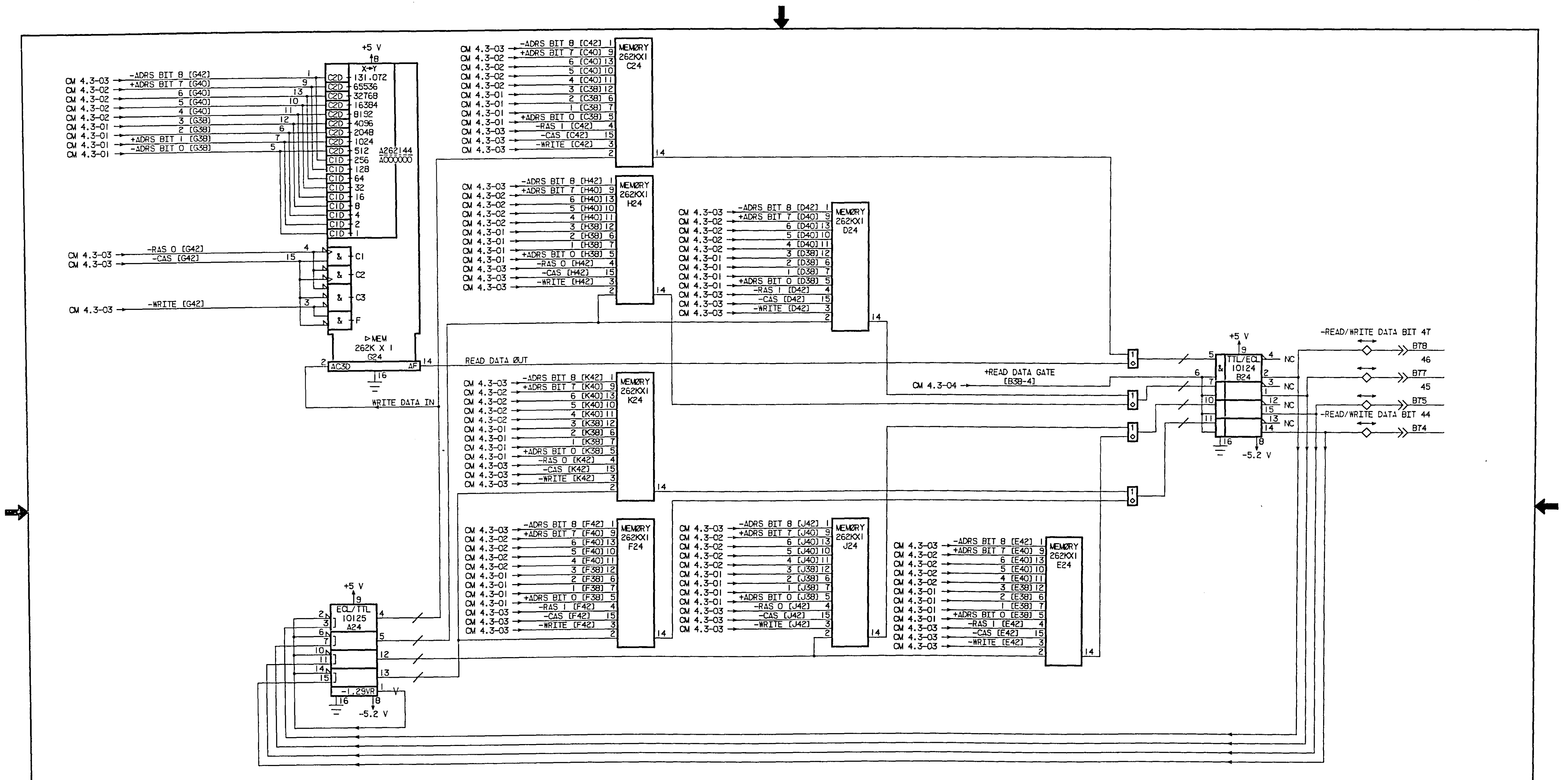
CODE IDENT

DWG NO 60458190

REV J

SHEET CM 4.3-15

PAGE 18-58



CONTROL DATA CORPORATION

DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM
MEMORY

CM 3.4

3HBH,A01-A08,A15-A22,
B01-B08,B15-B22

AD112-C

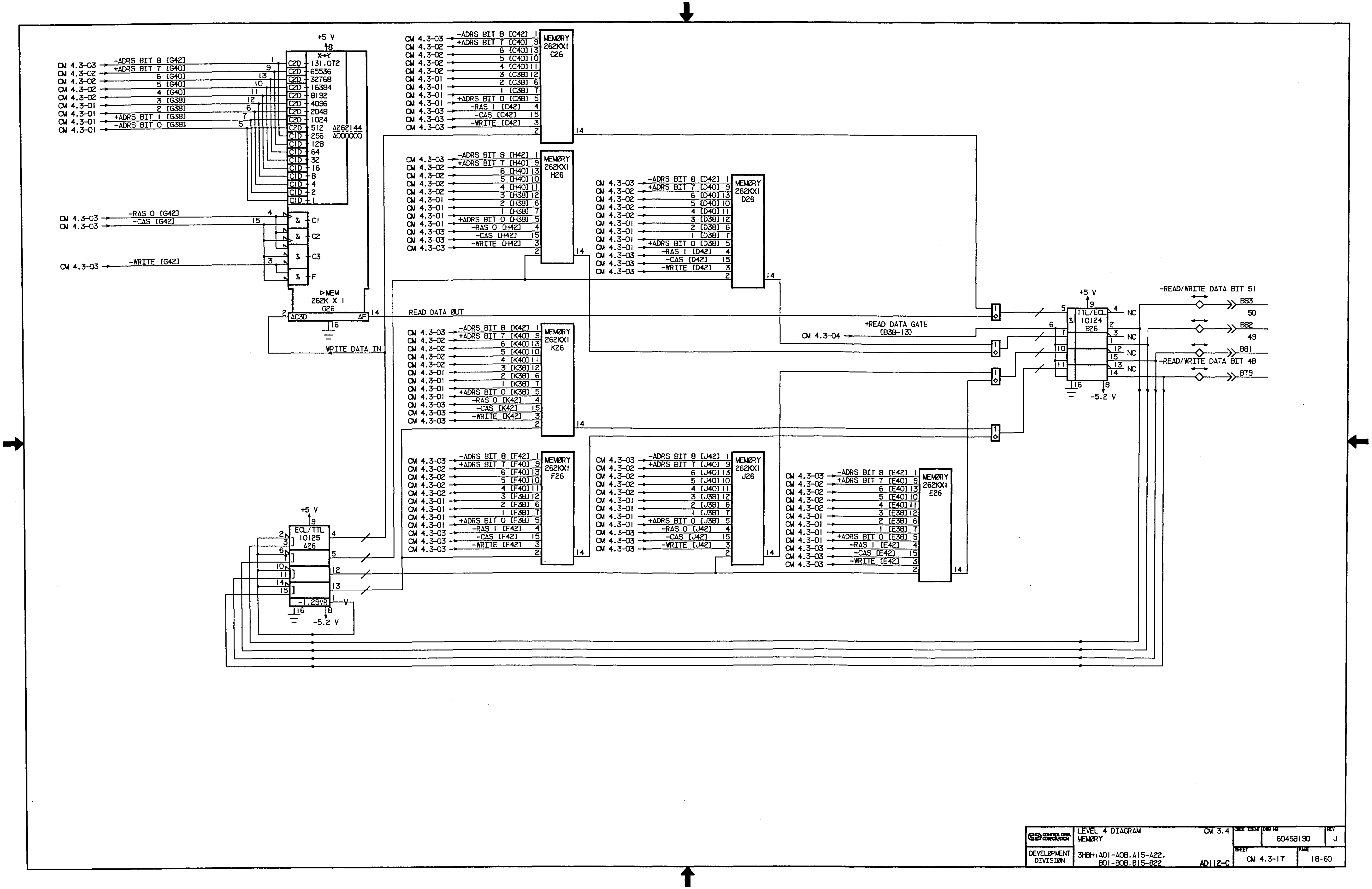
CODE IDENT

DWG NO 60458190

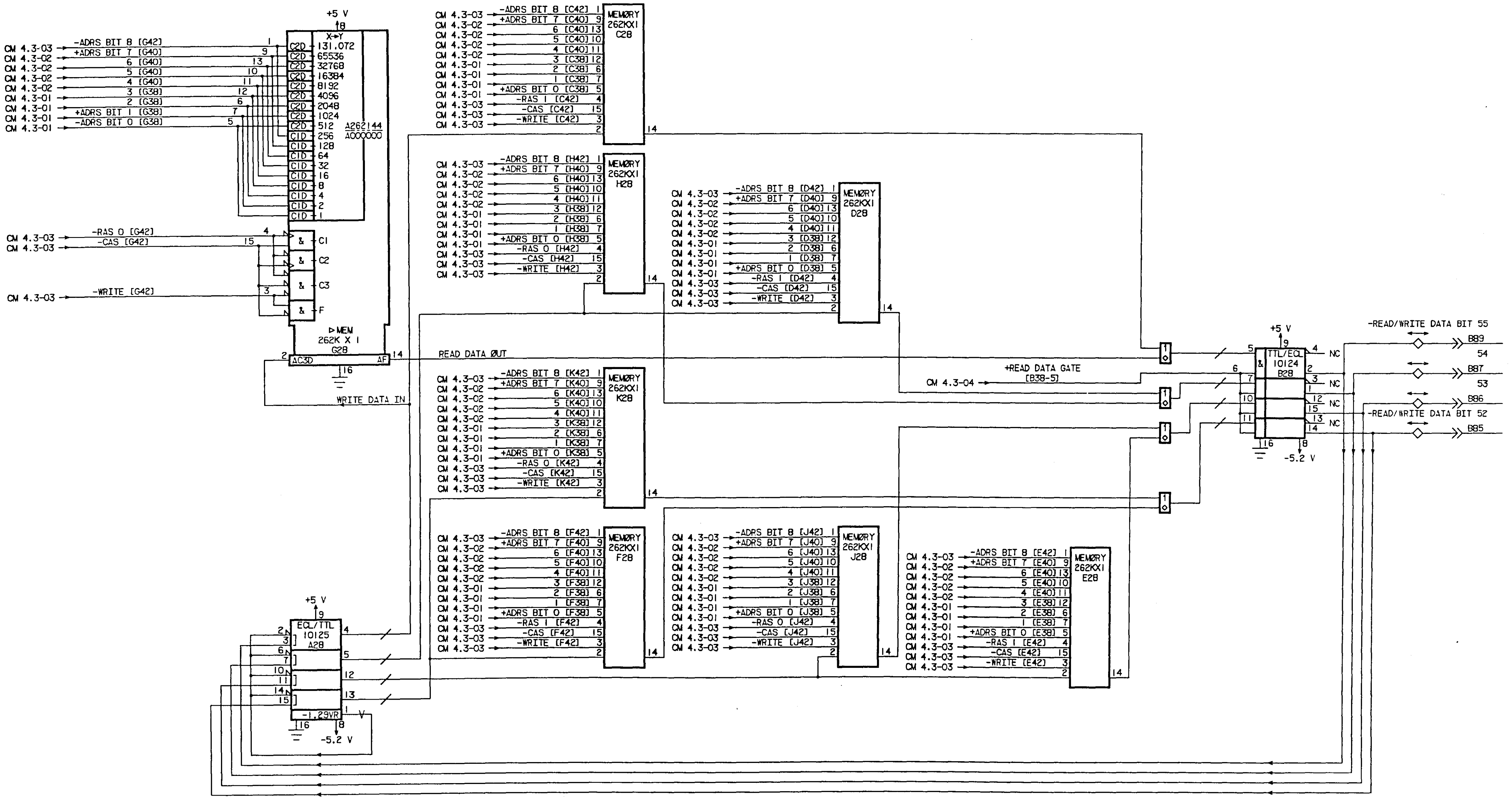
REV J

SHEET CM 4.3-16

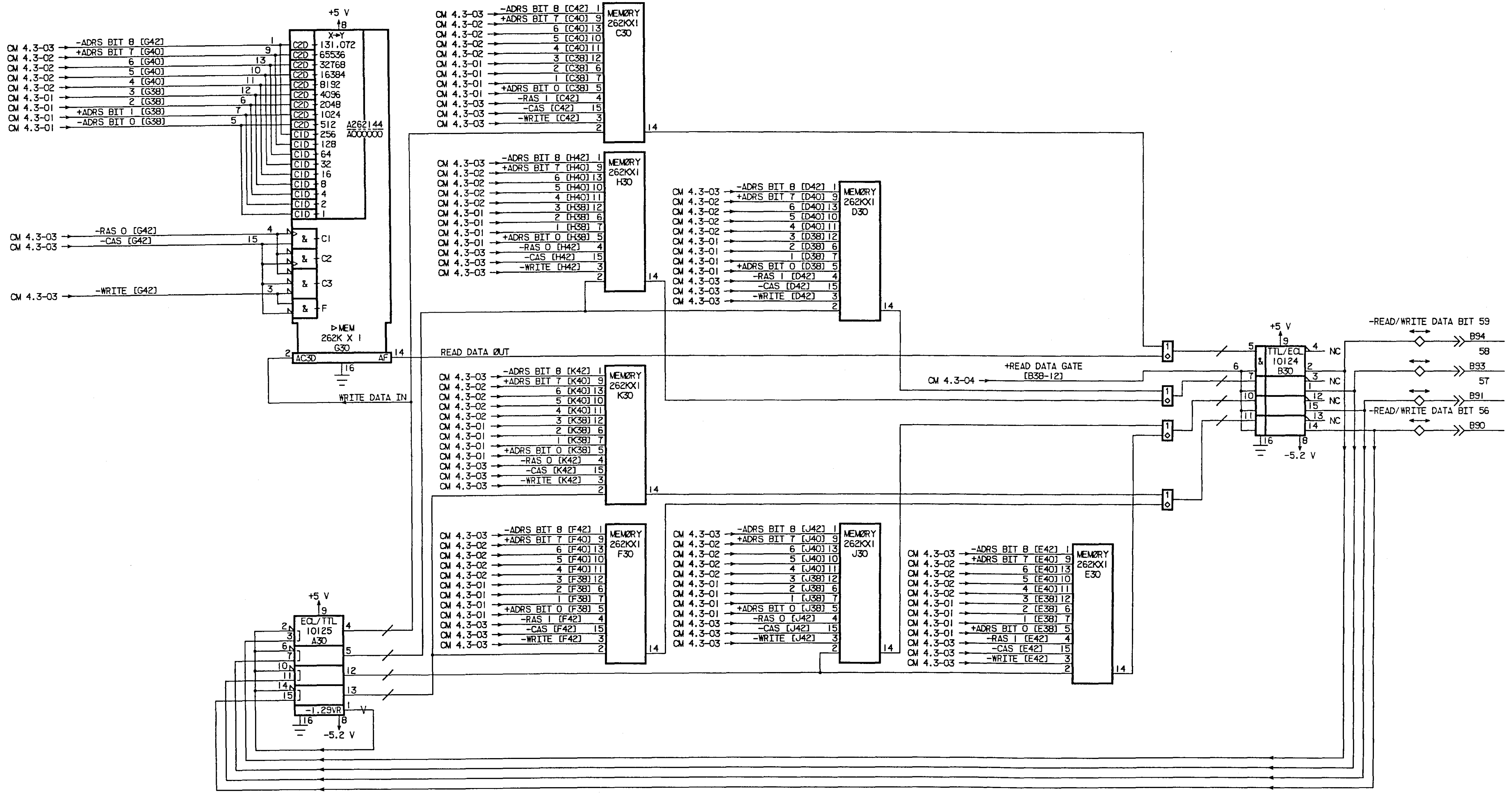
PAGE 18-59



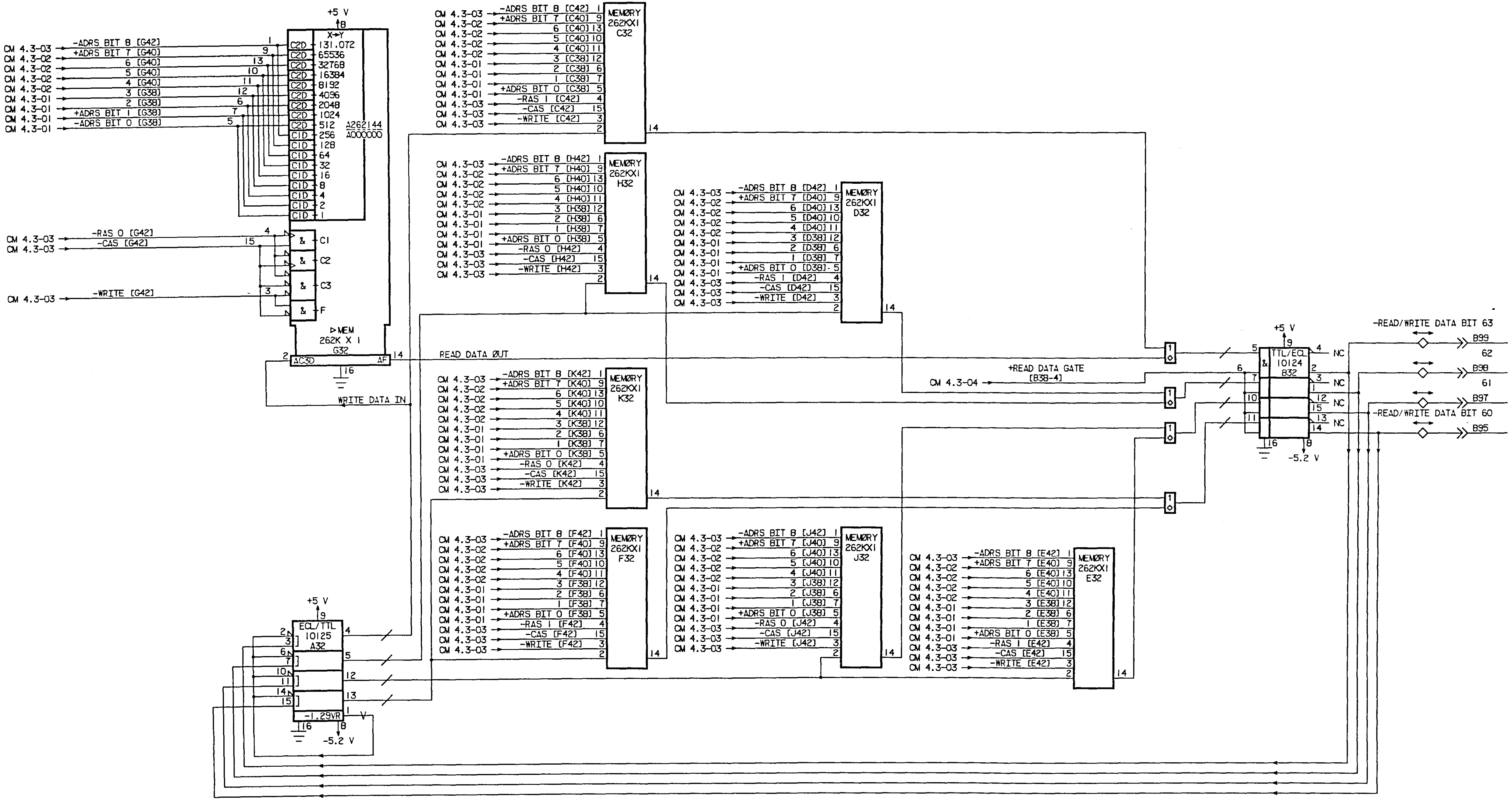
CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM MEMØRY	CM 3.4	CODE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	3HBH:A01-A08,A15-A22, B01-B08,B15-B22	AD112-C	SHEET CM 4.3-17	PAGE 18-60	



CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM MEMØRY	CM 3.4	CODE IDENT	DWG NO 60458190	REV K
DEVELØPMENT DIVISIØN	3HBH, A01-A08, A15-A22, B01-B08, B15-B22	AD112-C	SHEET CM 4.3-18	PAGE 18-61



CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM MEMØRY	CM 3.4	CODE IDENT	DWG NO 60458190	REV J
DEVELØPMENT DIVISIØN	3HBH:A01-A08.A15-A22. B01-B08.B15-B22	AD112-C	SHEET CM 4.3-19	PAGE 18-62



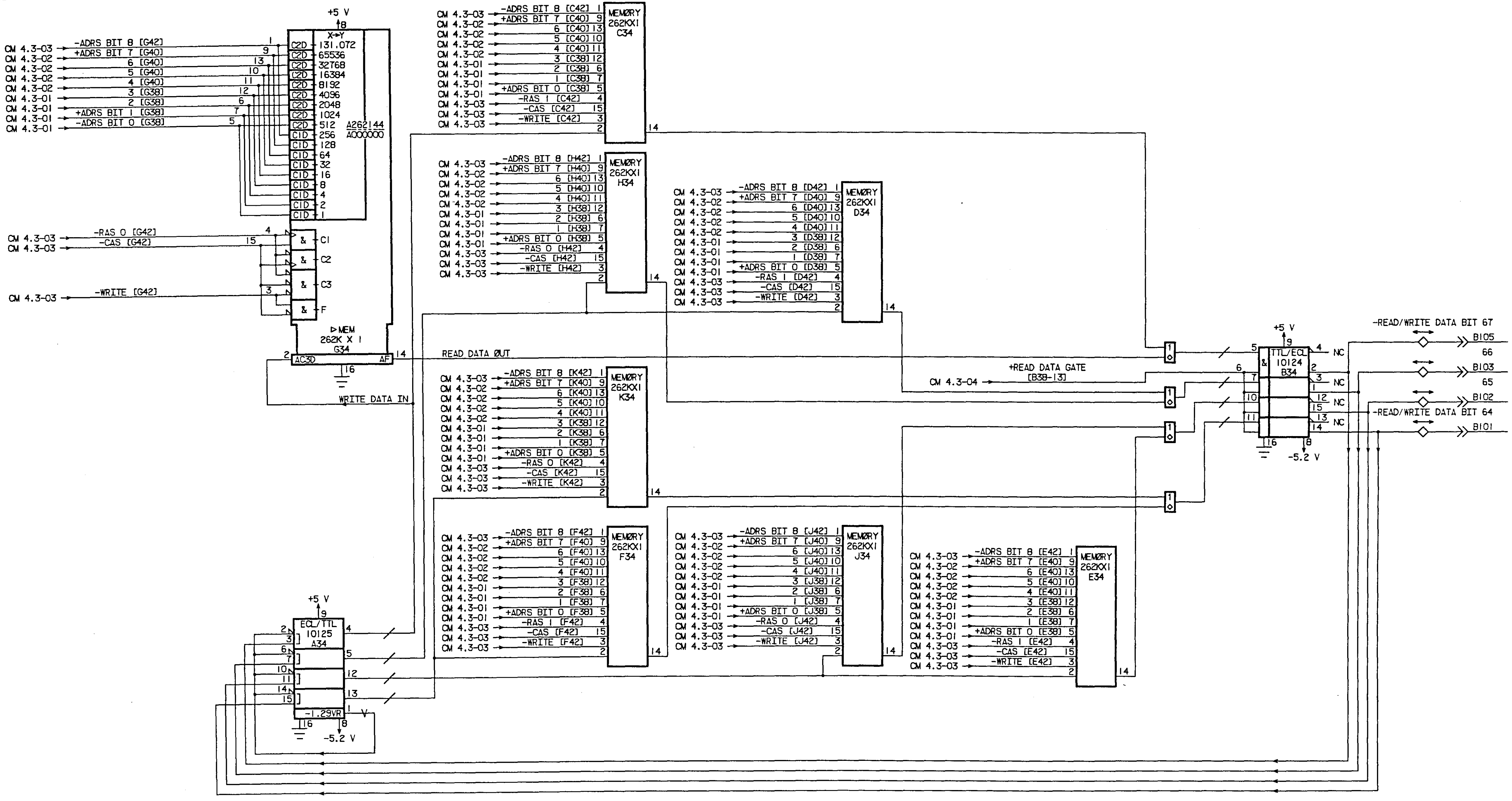
CONTROL DATA CORPORATION
DEVELØPMENT DIVISIØN

LEVEL 4 DIAGRAM
MEMØRY
CM 3.4

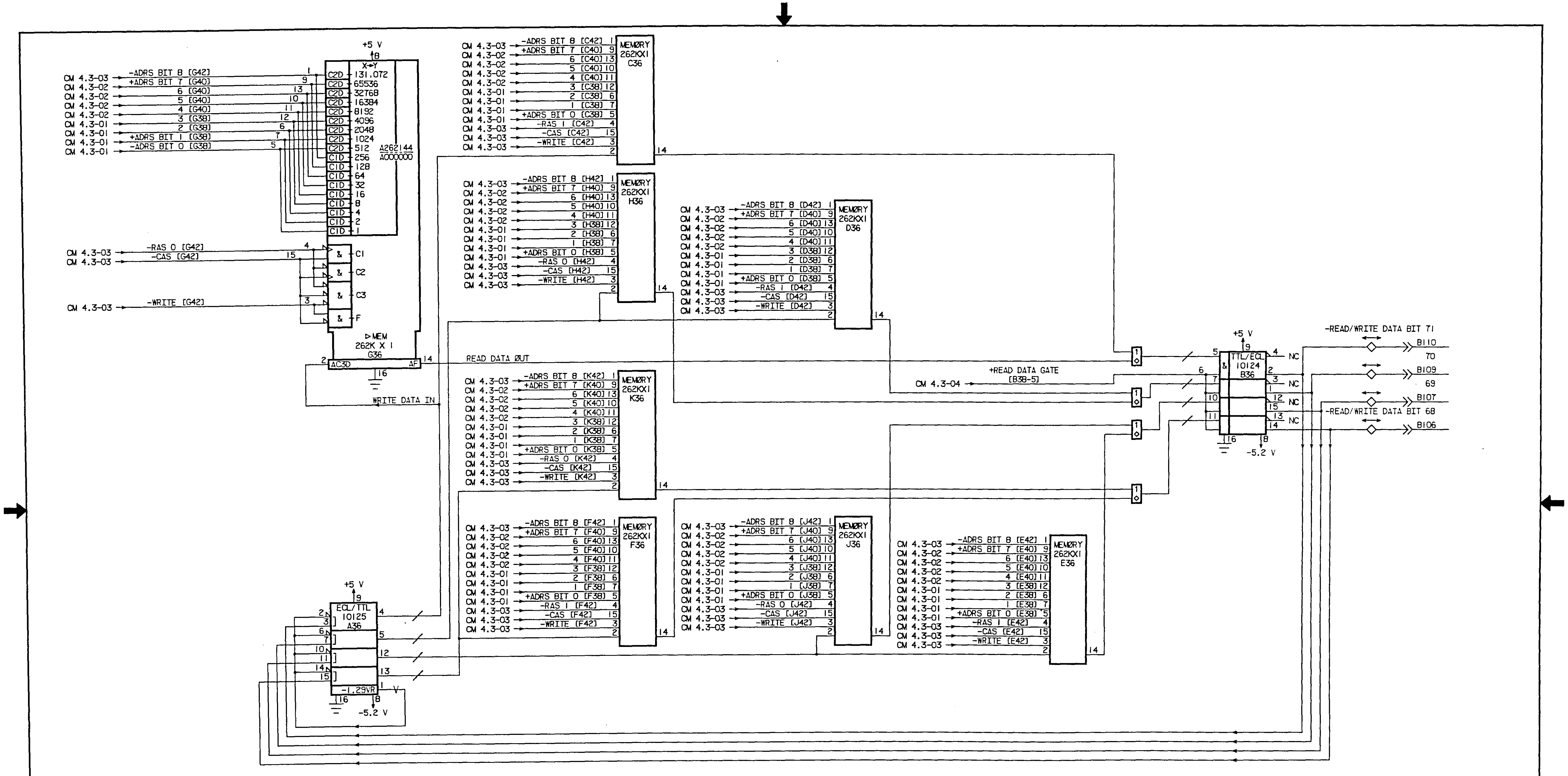
3HBH: A01-A08, A15-A22,
B01-B08, B15-B22
AD112-C

CAGE IDENT	DWG NO	REV
	60458190	J

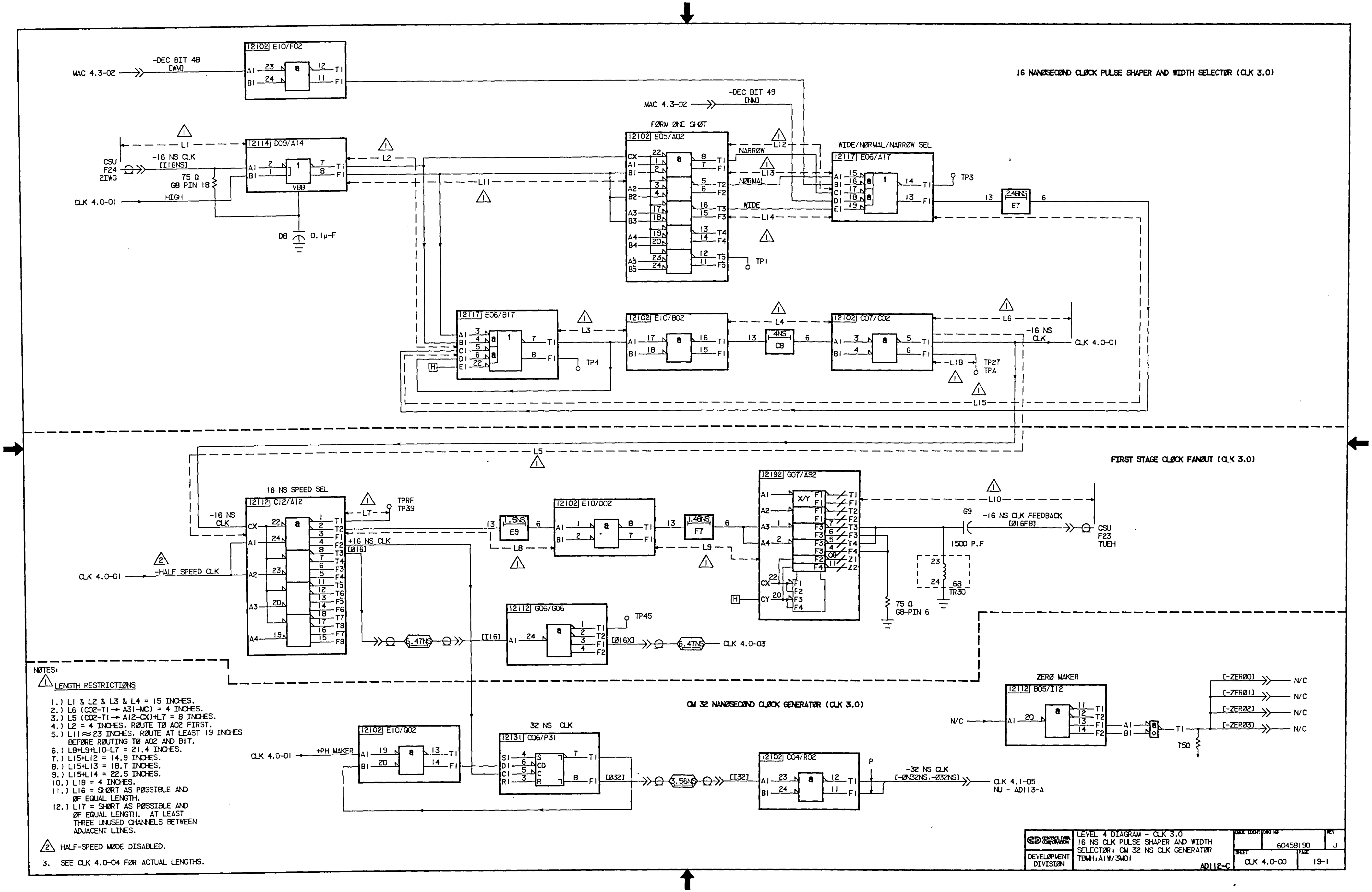
SHEET	PAGE
CM 4.3-20	18-63



CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM MEMØRY	CM 3.4	CODE IDENT / DWG NO 60458190 / REV J
DEVELØPMENT DIVISIØN	3HBH, A01-A08, A15-A22, B01-B08, B15-B22	AD112-C	SHEET CM 4.3-21 / PAGE 18-64



CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM MEMØRY	CM 3.4	CODE IDENT / DWG NO 60458190 / REV J
DEVELØPMENT DIVISIØN	3HBH,A01-A08,A15-A22, B01-B08,B15-B22	AD112-C	SHEET CM 4.3-22 / PAGE 18-65



NOTES:

⚠1 LENGTH RESTRICTIONS

1.) L1 & L2 & L3 & L4 = 15 INCHES.
2.) L6 (C02-T1 → A31-MC) = 4 INCHES.
3.) L5 (C02-T1 → A12-CX)+L7 = 8 INCHES.
4.) L2 = 4 INCHES. ROUTE TO A02 FIRST.
5.) L11 ≈ 23 INCHES. ROUTE AT LEAST 19 INCHES BEFORE ROUTING TO A02 AND B17.
6.) L8+L9+L10-L7 = 21.4 INCHES.
7.) L15+L12 = 14.9 INCHES.
8.) L15+L13 = 18.7 INCHES.
9.) L15+L14 = 22.5 INCHES.
10.) L18 = 4 INCHES.
11.) L16 = SHORT AS POSSIBLE AND OF EQUAL LENGTH.
12.) L17 = SHORT AS POSSIBLE AND OF EQUAL LENGTH. AT LEAST THREE UNUSED CHANNELS BETWEEN ADJACENT LINES.

⚠2 HALF-SPEED MODE DISABLED.

3. SEE CLK 4.0-04 FOR ACTUAL LENGTHS.

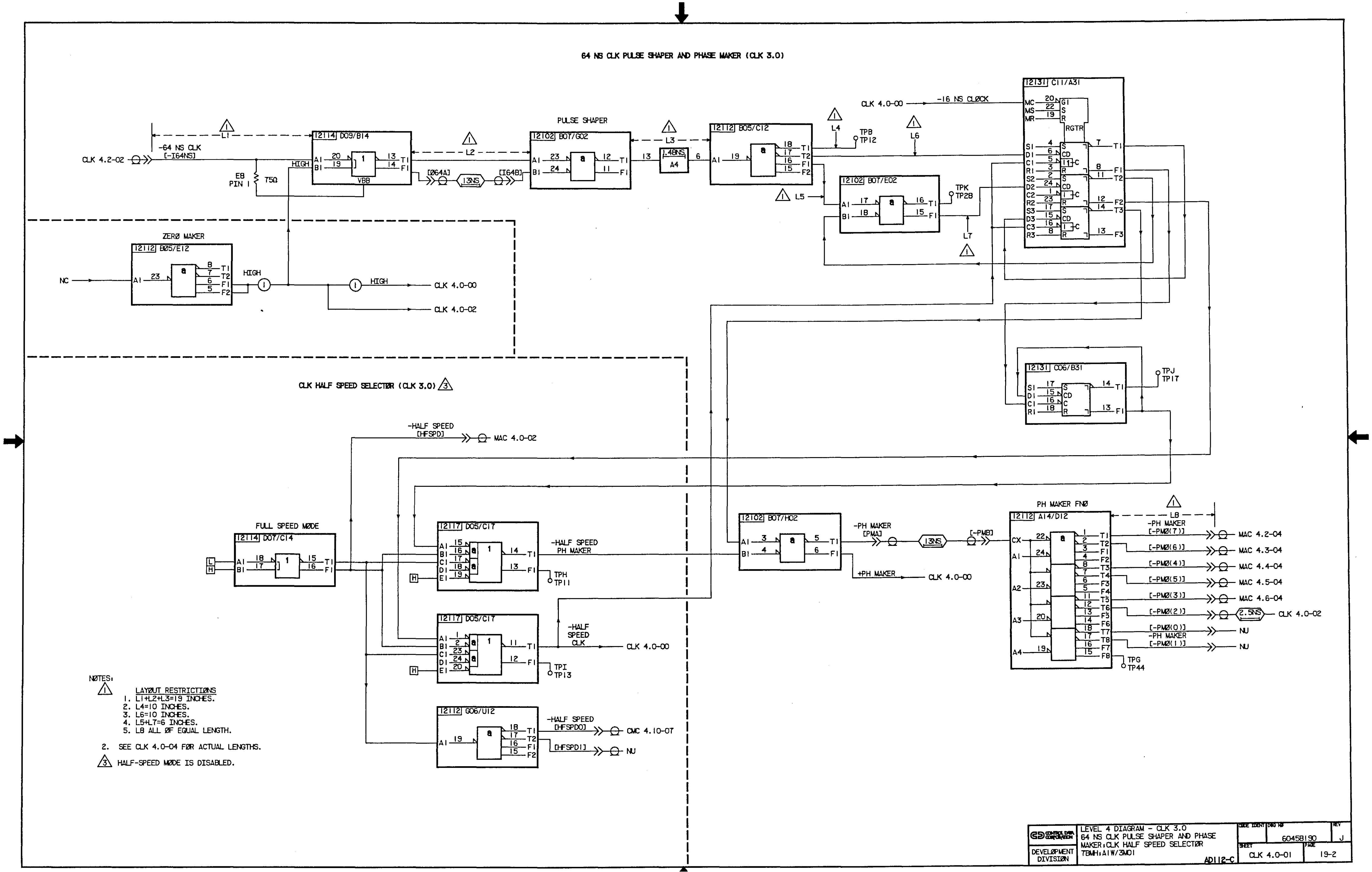
CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM - CLK 3.0
16 NS CLK PULSE SHAPER AND WIDTH
SELECTOR; CM 32 NS CLK GENERATOR
TBMH;A1W/3M01
AD112-C

CODE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CLK 4.0-00	19-1

64 NS CLK PULSE SHAPER AND PHASE MAKER (CLK 3.0)



NOTES:

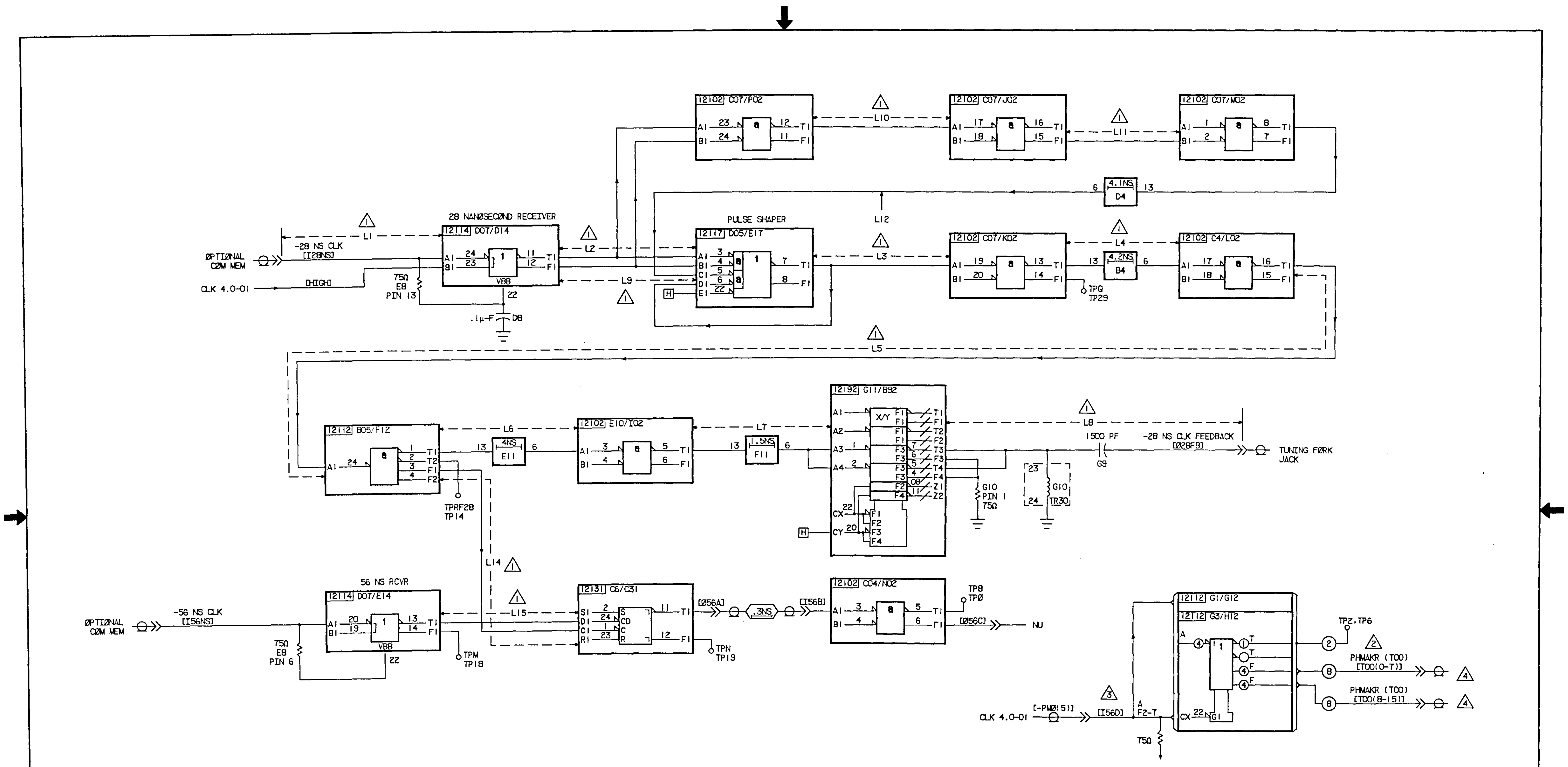
1. LAYOUT RESTRICTIONS
   1. L1+L2+L3=19 INCHES.
   2. L4=10 INCHES.
   3. L6=10 INCHES.
   4. L5+L7=6 INCHES.
   5. L8 ALL OF EQUAL LENGTH.
2. SEE CLK 4.0-04 FOR ACTUAL LENGTHS.
3. HALF-SPEED MODE IS DISABLED.

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION

LEVEL 4 DIAGRAM - CLK 3.0
64 NS CLK PULSE SHAPER AND PHASE MAKER; CLK HALF SPEED SELECTOR
TBMH; A1W/3M01
AD112-C

CAGE IDENT	DWG NO	REV
	60458190	J

SHEET	PAGE
CLK 4.0-01	19-2



NOTES:

△1 LENGTH RESTRICTIONS

1. L1+L2+L3+L4+L5+L13 = 44 INCHES.
2. L2 = 4 INCHES. ROUTE TO P02 FIRST.
3. L9≈ 23 INCHES. ROUTE AT LEAST 19 INCHES BEFORE GOING TO P02 AND E17.
4. L10+L11+L12 = 45 INCHES.
5. L6+L7+L8-L13 = 21.4 INCHES.
6. L15 = L14 = L13.

△2 THESE LINES MUST BE OF EQUAL LENGTH. AND AS SHORT AS POSSIBLE.

△3 PLACE POINT A UNDER AN UNUSED CIRCUIT LEAD PAD.
LENGTH FROM INPUT PIN TO POINT A ~ 1 INCHES;
FROM POINT A TO PIN 22 ON G12 AND H12 ~ 1.5 INCHES
AND OF EQUAL LENGTH.

△4 SIGNAL DESTINATIONS ARE AS FOLLOWS:

F/O SIGNAL	DEST TYPE	PAGE
TOO (0)	3R00	CMC 4.1-10
(1)	3Q01	CMC 4.12A-00
(2)	3Q02	CMC 4.12B-00
(3)	3Q03	CMC 4.12C-00
(4)	3Q04	CMC 4.12D-00
(5)	3Q05	CMC 4.12E-00
(6)	3Q06	CMC 4.12F-00
(7)	3Q07	CMC 4.12G-00
(8)	3Q08	CMC 4.12H-00
(9)	3Q09	CMC 4.12J-00
(10-15)	NU	

5. SEE CLK 4.0-04 FOR ACTUAL LENGTHS.

6. COMMON MEMORY CIRCUITRY NOT USED IN AD112-C.

		CODE IDENT	DWG NO	REV
CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM - CLK 3.0 COMMON MEMORY 28/56 NANOSECOND CLOCK INTERFACE 7BMH;A1W/3M01		60458190	J
DEVELOPMENT DIVISION	AD112-C	SHEET CLK 4.0-02	PAGE 19-3	

REVISION RECORD

REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

12112 LOC: G1 NAME: G12

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1		0	1	T1	TERM	
						2	T2	TERM	
						3	F1	PIC-12	
						4	F2	PIC-11	
			A2		1	8	T3	TERM	
						7	T4	TERM	
						6	F3	PIC-8	
						5	F4	PIC-7	
			A3		2	11	T5	TERM	
						12	T6	TERM	
						13	F5	PIC-4	
						14	F6	PIC-3	
			A4		3	18	T7	TP-2	
						17	T8	TERM	
						16	F7	PIC-16	
						15	F8	PIC-15	
P2A-34		T	CX	22					

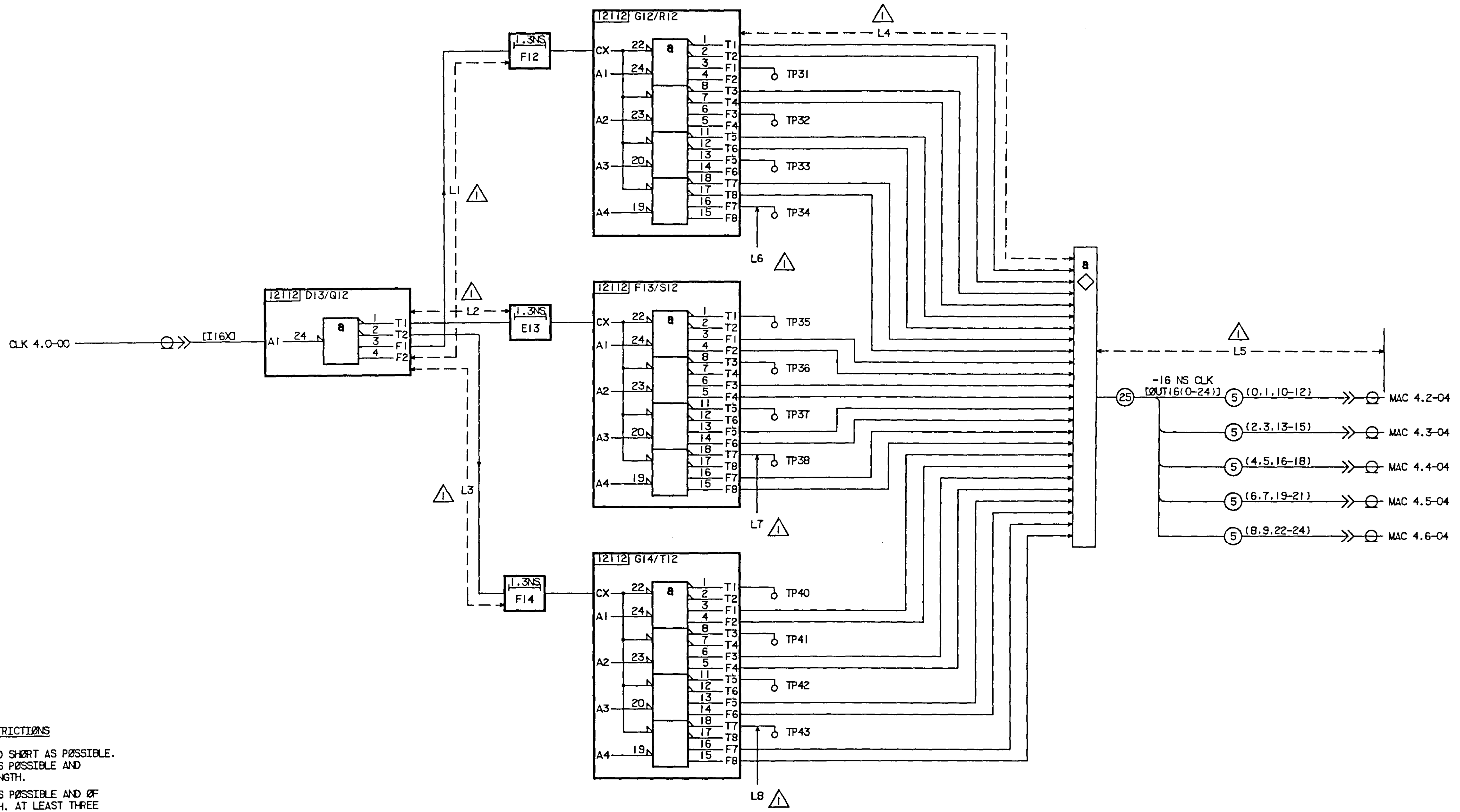
12112 LOC: G3 NAME: H12

SOURCE	DAISY CHAIN	T	V IP	R IP	BIT NAME	R OP	V OP	DEST	L
			A1		4	1	T1	TERM	
						2	T2	TERM	
						3	F1	PIC-40	
						4	F2	PIC-39	
			A2		5	8	T3	TERM	
						7	T4	TERM	
						6	F3	PIC-36	
						5	F4	PIC-35	
			A3		6	11	T5	TERM	
						12	T6	TERM	
						13	F5	PIC-32	
						14	F6	PIC-31	
			A4		7	18	T7	TP-6	
						17	T8	TERM	
						16	F7	PIC-44	
						15	F8	PIC-43	
P2A-34		T	CX	22					

ARDEN HILLS OPERATIONS

LEVEL 4 BACKUP CHART
SUPPLEMENTAL WIRING INFORMATION
7BMH ; A1W/3M01 AD112-C

CODE IDENT 34010 D
DWG NO 60458190
REV J
SHEET CLK 4.0-02A 19 - 4



NOTES: △ LENGTH RESTRICTIONS

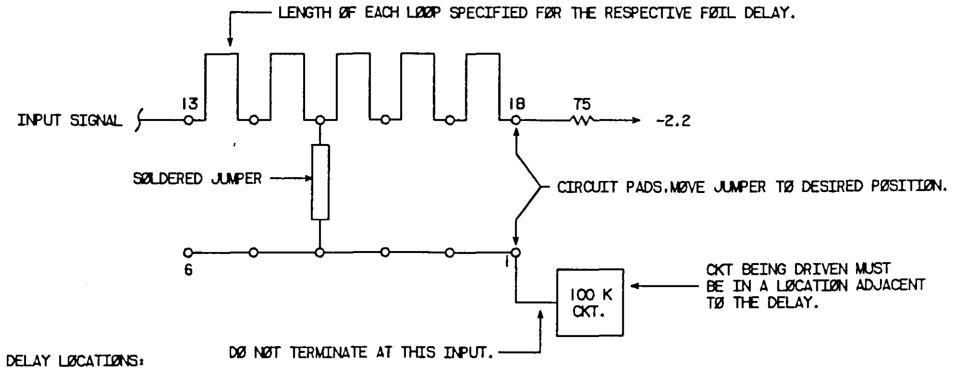
1. L1=L2=L3 AND SHORT AS POSSIBLE.
2. L4. SHORT AS POSSIBLE AND OF EQUAL LENGTH.
3. L5. SHORT AS POSSIBLE AND OF EQUAL LENGTH. AT LEAST THREE UNUSED CHANNELS BETWEEN ADJACIENT LINES.
4. L6=L7=L8 THESE RESTRICTIONS ONLY APPLY TO TP34, TP38, TP43.
5. FOIL DELAYS D10, D11, D12 ARE DESCRIBED ON 3.0-04

2. SEE CLK 4.0-04 FOR ACTUAL LENGTHS.

CONTROL DATA CORPORATION	LEVEL 4 DIAGRAM - CLK 3.0 FIRST STAGE CLOCK FANOUT TBMH, A1W/3M01	CODE IDENT	DWG NO 60458190	REV J
DEVELOPMENT DIVISION	AD112-C	SHEET CLK 4.0-03	PAGE 19-5	

NOTES:

1. LENGTHS SPECIFIED ON PATHS HAVING AN ADJUSTABLE FOIL DELAY EXCLUDE THE LENGTH OF FOIL IN THE DELAY ITSELF. ALL LENGTHS ASSUME NON-PARALLEL RUNS. IF PARALLEL RUNS ARE MADE THE LENGTH MUST BE ADJUSTED ACCORDINGLY.
2. ALL LENGTHS HAVE A TOLERANCE ± 5 PERCENT.
3. FOIL DELAYS: ALL DELAYS THAT ARE INDICATED - $\boxed{\frac{\text{XXNS}}{\text{LOC YY}}}$ - ARE TO BE IMPLEMENTED AS FOLLOWS:


LENGTH OF EACH LOOP SPECIFIED FOR THE RESPECTIVE FOIL DELAY.
INPUT SIGNAL
13
18
75
-2.2
SOLDERED JUMPER
CIRCUIT PADS.MOVE JUMPER TO DESIRED POSITION.
6
1
100 K CKT.
CKT BEING DRIVEN MUST BE IN A LOCATION ADJACENT TO THE DELAY.
DO NOT TERMINATE AT THIS INPUT.

FOR DELAY LOCATIONS:

LOC C8 - FOUR LOOPS OF 4.8 INCHES
LOC E07 - FIVE LOOPS OF 2.4 INCHES
LOC A04 - FOUR LOOPS OF 4.8 INCHES
LOC E09 - TWO LOOPS OF 9.6 INCHES
LOC F07 - FIVE LOOPS OF 1.4 INCHES
LOCD04 - FOUR LOOPS OF 4.8 INCHES
LOC B04 - FOUR LOOPS OF 4.8 INCHES
LOC E11 - TWO LOOPS OF 9.6 INCHES
LOC F11 - FIVE LOOPS OF 1.4 INCHES
LOC'S F12.E13.F14 - FIVE LOOPS OF 1.25 INCHES

FOR DELAYS OF LESS THAN FIVE LOOPS, LAYOUT THE LOOPS STARTING IN THE LEFTMOST PIN POSITIONS.

4. THE 12114 X SECTIONS A14 AND B14 SHOULD BE IN A DIFFERENT IC THAN X SECTIONS D14 AND E14.

ACTUAL LENGTHS

PAGE 0

L1 - 3.4
L2 - 4
L3 - 3.8
L4 - 4.5
L5 - 5.3
L6 - 4
L7 - 3
L8 - 10.1
L9 - 11.1
L10 - 3.2
L11 - 22.3
L12 - 8.9
L13 - 12.8
L14 - 18.4
L15 - 6.4
L16 - .3
L17 - 1.14

PAGE 1

L1 - 3.8
L2 - 6.8
L3 - 8.6
L4 - 10.5
L5 - 1.7
L6 - 10.0
L7 - 4.3
L8 - 1.2,1.2,1.1,1.1,1.1,1.2,1.1,1.2

PAGE 2

L1 - 4.2
L2 - 4.1
L3 - 11
L4 - 11.1
L5 - 10.8
L6 - 10.1
L7 - 10.4
L8 - 2.6
L9 - 23
L10 - 15.2
L11 - 15
L12 - 14.6
L13 - 2.3
L14 - 2
L15 - 2

△1 1.5,1.36,1.36,1.44,1.4,1.4,1.4,
1.36,1.42,1.4,1.44,1.36,1.4,
1.34,1.46,1.4

D1 - 4.8,5.0,4.8,5.2
D2 - 2.4,2.4,2.4,2.3,2.4
D3 - 4.8,5.2,4.6,5.2
D4 - 9.6,9.6
D5 - 1.45,1.4,1.4,1.6
D6 - 4.8,5.0,4.7,5.2
D7 - 4.9,5.1,4.9,5.1
D8 - 9.8,9.6
D9 - 1.4,1.4,1.5,1.36,1.5

CONTROL DATA CORPORATION
DEVELOPMENT DIVISION
LEVEL 4 NOTES
7BMH:A1W/3M01
AD112-C
CODE IDENT
DWG NO 60458190
REV J
SHEET CLK 4.0-04
PAGE 19-6

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP

LEFT ZIF

BIT NAME	I/Ø	PAGE	TYPE	VIRTUAL PIN	REAL PIN
ZERØ 0	Ø	00	Z	L04	PIA-11
ZERØ 1	Ø	00	Z	L05	PIA-12
ZERØ 2	Ø	00	Z	L06	PIA-14
ZERØ 3	Ø	00	Z	L07	PIA-15
FULL	I	01	D	L08	P2A-1
NFULL	I	01	D	L09	P2A-2
Ø64A	Ø	01	C	L12	PIA-40
I64B	I	01	C	L13	PIA-25
PMA	Ø	01	C	L14	PIA-24
PMB	I	01	C	L15	PIA-1
Ø56A	Ø	02	C	L16	PIA-35
I56B	I	02	C	L17	PIA-37
Ø56C	Ø	02	C	L18	PIA-36
I56D	I	02	C	L19	P2A-34
Ø32NS	Ø	00	D	L20	PIA-27
ØN32NS	Ø	00	D	L21	PIA-26

LEFT ZIF GROUND PINS			
PIA-03	PIA-23	P2A-03	P2A-23
PIA-08	PIA-28	P2A-08	P2A-28
PIA-13	PIA-33	P2A-13	P2A-33
PIA-18	PIA-38	P2A-18	P2A-38

CØAX

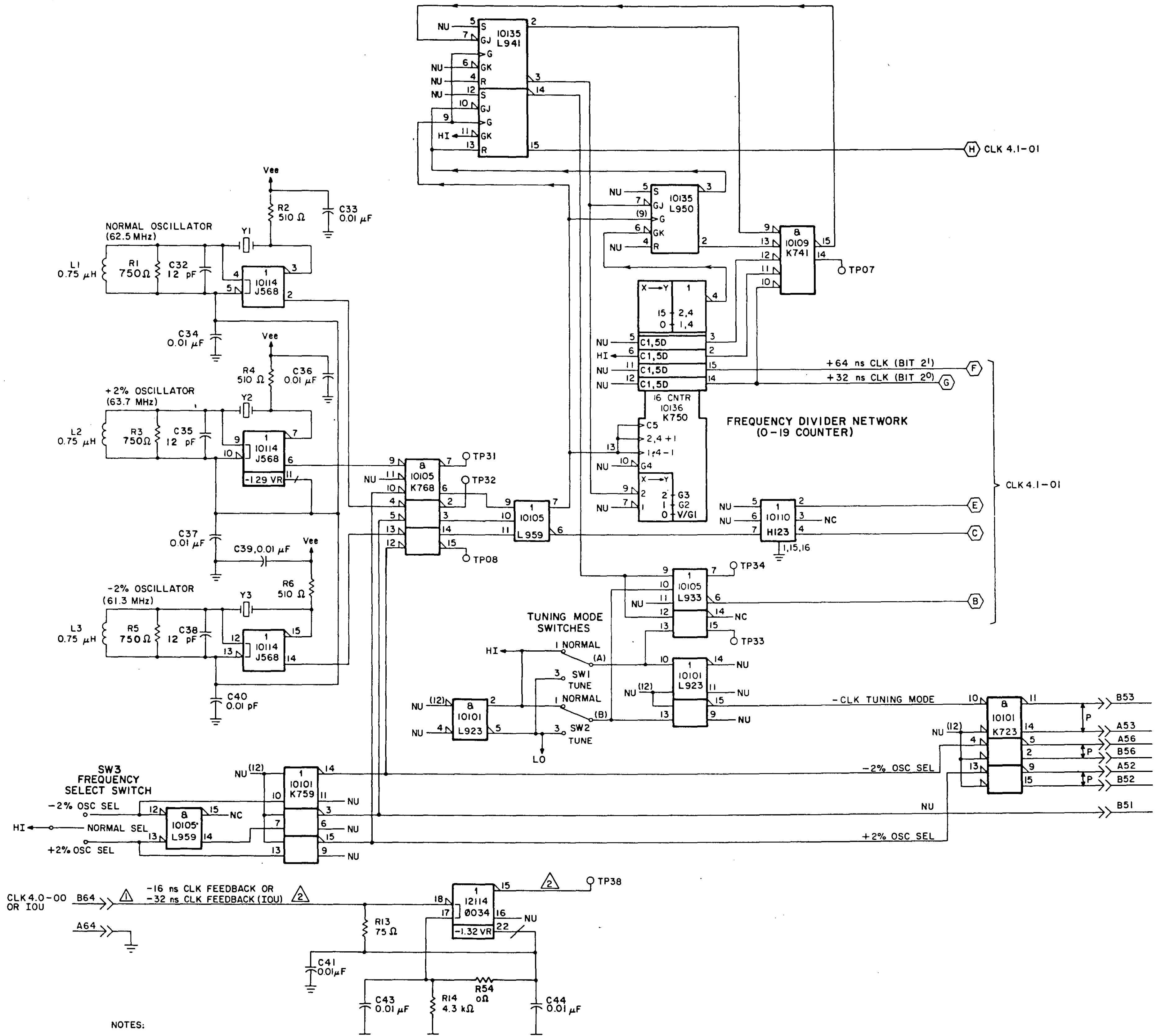
BIT NAME	I/Ø	PAGE	TYPE	VIRTUAL PIN	REAL PIN
I16NS	I	00	C	V00	PIC-125
ØUT 16 (0)	Ø	03	C	V01	PIC-137
ØUT 16 (1)	Ø	03	C	V02	PIC-138
ØUT 16 (2)	Ø	03	C	V03	PIC-141
ØUT 16 (3)	Ø	03	C	V04	PIC-142
ØUT 16 (4)	Ø	03	C	V05	PIC-145
ØUT 16 (5)	Ø	03	C	V06	PIC-146
ØUT 16 (6)	Ø	03	C	V07	PIC-149
ØUT 16 (7)	Ø	03	C	V08	PIC-150
ØUT 16 (8)	Ø	03	C	V09	PIC-153
ØUT 16 (9)	Ø	03	C	V10	PIC-154
Ø16FB	Ø	00	C	V11	PIC-114
I64NS	I	01	C	V12	PIC-130
I28NS	I	02	C	V13	PIC-91
I56NS	I	02	C	V14	PIC-92
Ø28FB	Ø	02	C	V15	PIC-113
TOO (0)	Ø	02	C	V16	PIC-12
TOO (1)	Ø	02	C	V17	PIC-8
TOO (2)	Ø	02	C	V18	PIC-4
TOO (3)	Ø	02	C	V19	PIC-16
TOO (4)	Ø	02	C	V20	PIC-40
TOO (5)	Ø	02	C	V21	PIC-36
TOO (6)	Ø	02	C	V22	PIC-32
TOO (7)	Ø	02	C	V23	PIC-44
TOO (8)	Ø	02	C	V24	PIC-11
TOO (9)	Ø	02	C	V25	PIC-7
TOO (10)	Ø	02	C	V26	PIC-3
TOO (11)	Ø	02	C	V27	PIC-15
TOO (12)	Ø	02	C	V28	PIC-39
TOO (13)	Ø	02	C	V29	PIC-35
TOO (14)	Ø	02	C	V30	PIC-31
TOO (15)	Ø	02	C	V31	PIC-43
HFSPD0	Ø	01	C	V32	PIC-71
HFSPD1	Ø	01	C	V33	PIC-75
HFSPD	Ø	01	C	V34	PIC-72
Ø16	Ø	00	C	V35	PIC-79
I16	I	00	C	V36	PIC-83
Ø16X	Ø	00	C	V37	PIC-87
ØUT 16 (10)	Ø	03	C	V38	PIC-157
ØUT 16 (11)	Ø	03	C	V39	PIC-158
ØUT 16 (12)	Ø	03	C	V40	PIC-161
ØUT 16 (13)	Ø	03	C	V41	PIC-162
ØUT 16 (14)	Ø	03	C	V42	PIC-165
ØUT 16 (15)	Ø	03	C	V43	PIC-166
ØUT 16 (16)	Ø	03	C	V44	PIC-169
ØUT 16 (17)	Ø	03	C	V45	PIC-170
ØUT 16 (18)	Ø	03	C	V46	PIC-173
ØUT 16 (19)	Ø	03	C	V47	PIC-174
ØUT 16 (20)	Ø	03	C	V48	PIC-177
ØUT 16 (21)	Ø	03	C	V49	PIC-178
ØUT 16 (22)	Ø	03	C	V50	PIC-181
ØUT 16 (23)	Ø	03	C	V51	PIC-182
ØUT 16 (24)	Ø	03	C	V52	PIC-185
I16X	I	03	C	V54	PIC-133
Ø32	Ø	00	C	V55	PIC-019
I32	I	00	C	V56	PIC-020

RIGHT ZIF

BIT NAME	I/Ø	PAGE	TYPE	VIRTUAL PIN	REAL PIN
WM	I	00	C	R00	P2B-19
NM	I	00	C	R01	P2B-9
PMØ (0)	Ø	01	C	R02	PIB-1
PMØ (1)	Ø	01	C	R03	PIB-2
PMØ (2)	Ø	01	C	R04	PIB-5
PMØ (3)	Ø	01	C	R05	PIB-4
PMØ (4)	Ø	01	C	R06	PIB-9
PMØ (5)	Ø	01	C	R07	PIB-10
PMØ (6)	Ø	01	C	R08	PIB-11
PMØ (7)	Ø	01	C	R09	PIB-12

RIGHT ZIF GROUND PINS			
PIB-03	PIB-23	P2B-03	P2B-23
PIB-08	PIB-28	P2B-08	P2B-28
PIB-13	PIB-33	P2B-13	P2B-33
PIB-18	PIB-38	P2B-18	P2B-38

ARDEN HILLS OPERATIONS	LEVEL 4 CONNECTOR CHART SUPPLEMENTAL WIRING INFORMATION 7BMH ; AIW / 3M01 AD112 - C	CODE IDENT 34010	D	DWG NO 60458190	REV J
				SHEET CLK 4.0-CC	19-7



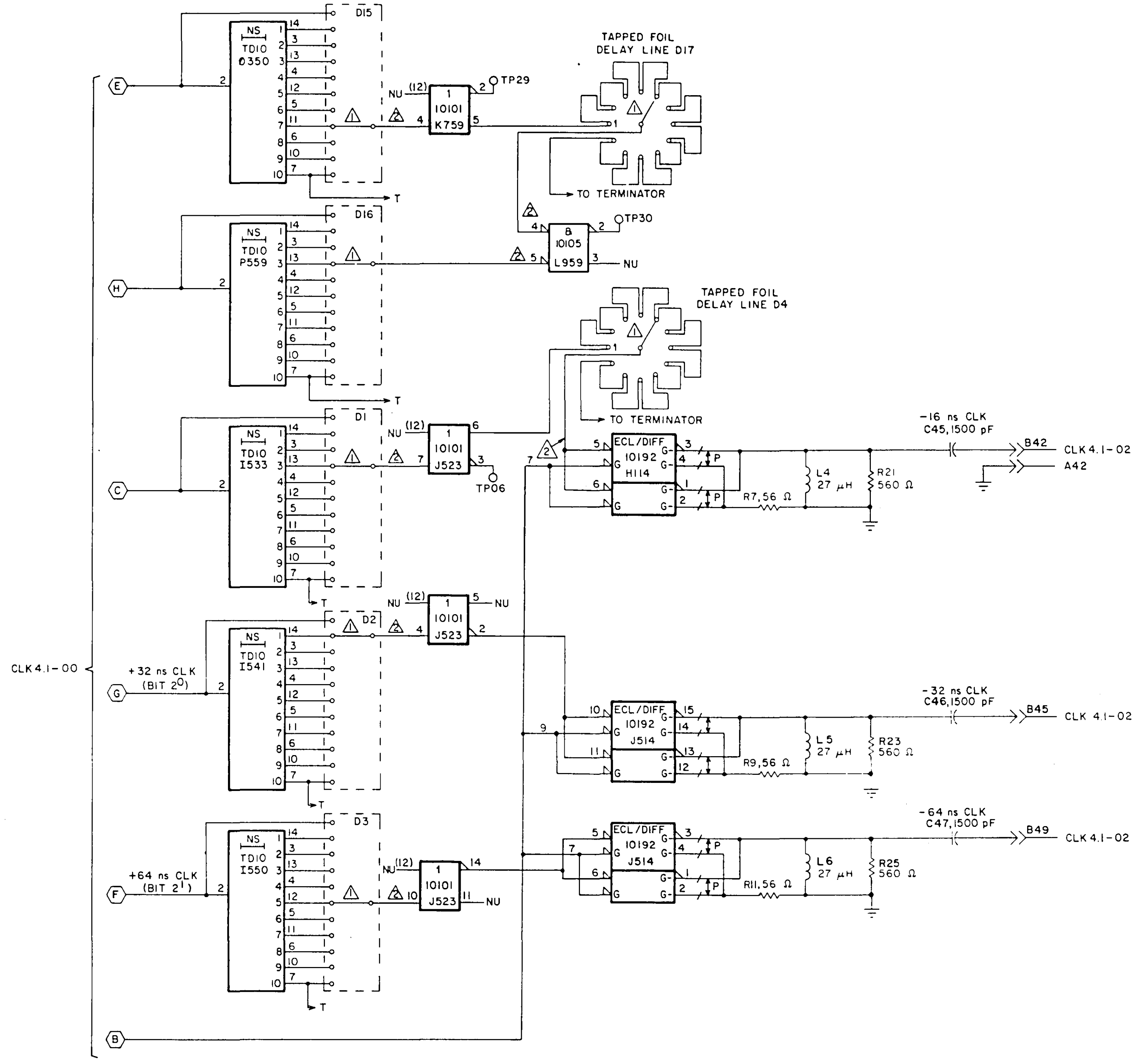
NOTES:

1. USED DURING TEST FOR CLOCK TUNING PROCEDURE.
2. ADD FOIL IN SERIES WITH TP38 SO THAT TOTAL LENGTH OF FOIL IS 33.0 ± 1.0 INCHES.

ARDEN HILLS OPERATIONS

LEVEL 4 DIAGRAM
MASTER CLOCK OSCILLATOR
CLK 3.0
4UEH; A14
AD112-C

CODE IDENT		DWG NO	REV
34010	D	60458190	N
		SHEET CLK 4.1-00	19-8

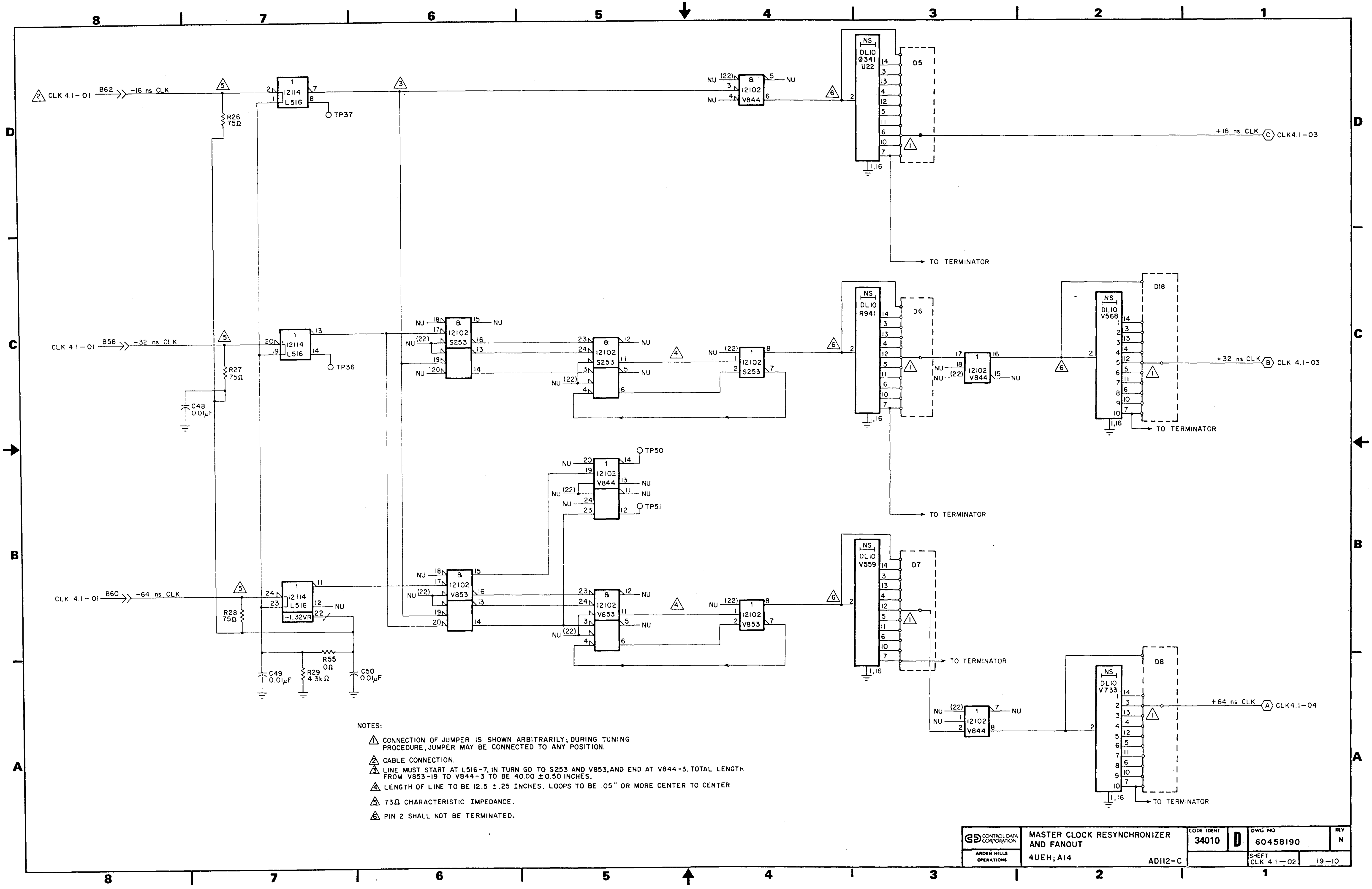


NOTES:

△1 CONNECTION OF JUMPER IS SHOWN ARBITRARILY; DURING TUNING PROCEDURE, JUMPER MAY BE CONNECTED TO ANY POSITION.

△2 NO TERMINATION; DELAY LINE IS TERMINATED.

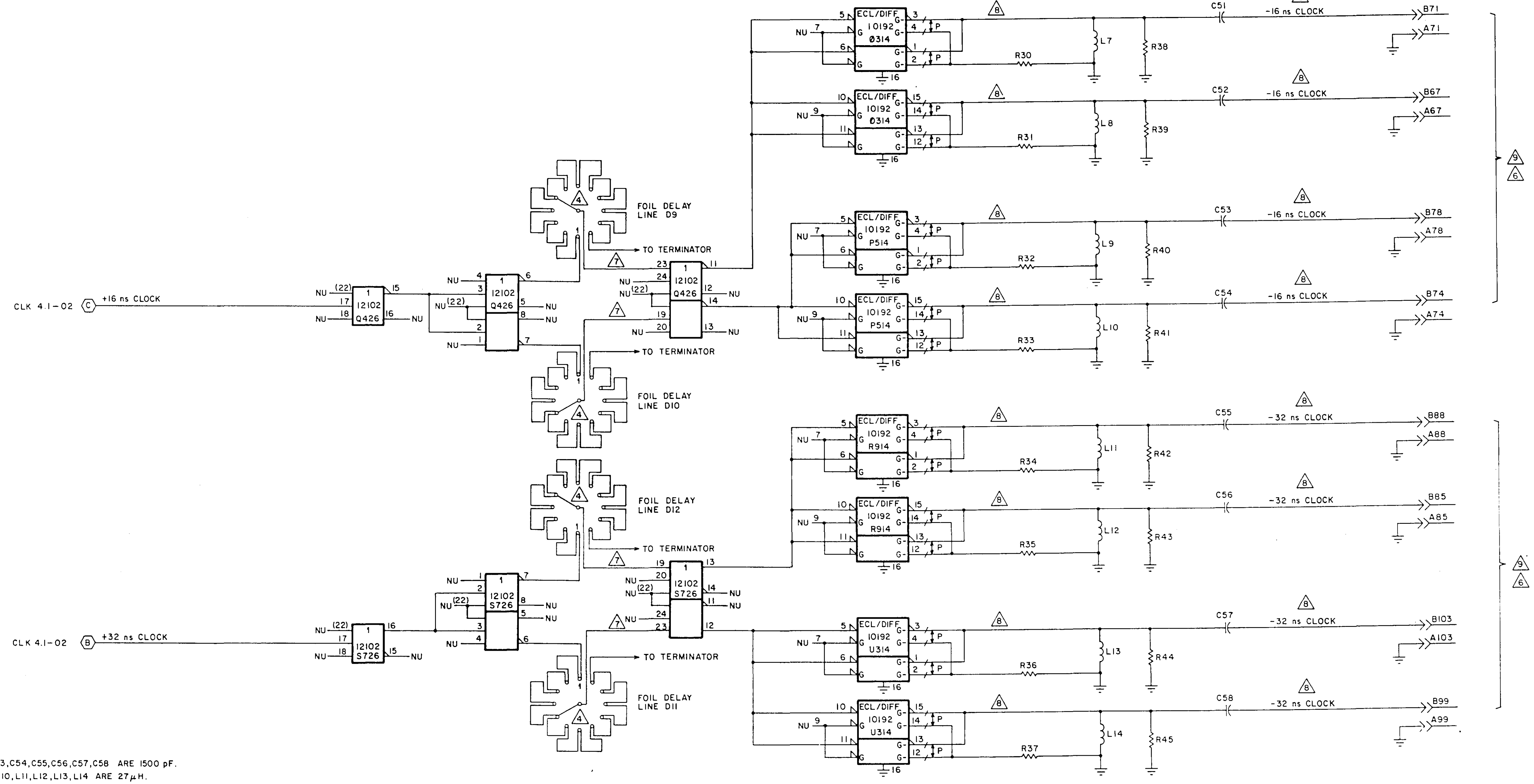
CONTROL DATA CORPORATION ARDEN HILLS OPERATIONS	LEVEL 4 DIAGRAM MASTER CLOCK OSCILLATOR CLK 3.0	CODE IDENT 34010	D	DWG NO 60458190	REV N
	4UEH; A14 AD112-C			SHEET CLK 4.1-01	19-9



NOTES:

1. CONNECTION OF JUMPER IS SHOWN ARBITRARILY; DURING TUNING PROCEDURE, JUMPER MAY BE CONNECTED TO ANY POSITION.
2. CABLE CONNECTION.
3. LINE MUST START AT L516-7, IN TURN GO TO S253 AND V853, AND END AT V844-3. TOTAL LENGTH FROM V853-19 TO V844-3 TO BE 40.00 ±0.50 INCHES.
4. LENGTH OF LINE TO BE 12.5 ±.25 INCHES. LOOPS TO BE .05" OR MORE CENTER TO CENTER.
5. 73Ω CHARACTERISTIC IMPEDANCE.
6. PIN 2 SHALL NOT BE TERMINATED.

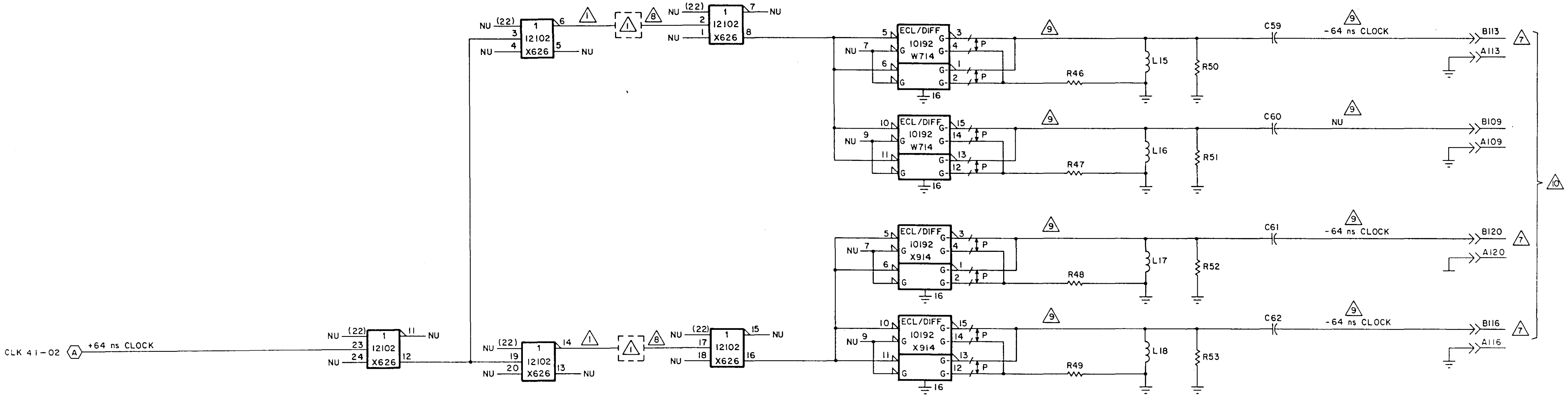
CONTROL DATA CORPORATION ARDEN HILLS OPERATIONS	MASTER CLOCK RESYNCHRONIZER AND FANOUT 4UEH; A14 AD112-C	CODE IDENT 34010	D	DWG NO 60458190 SHEET CLK 4.1-02 19-10	REV N


CLK 4.1-02 (C) +16 ns CLOCK
CLK 4.1-02 (B) +32 ns CLOCK
12102 Q426
12102 S726
FOIL DELAY LINE D9
FOIL DELAY LINE D10
FOIL DELAY LINE D12
FOIL DELAY LINE D11
TO TERMINATOR
ECL/DIFF 10192 Ø314
ECL/DIFF 10192 P514
ECL/DIFF 10192 R914
ECL/DIFF 10192 U314
NU
L7 L8 L9 L10 L11 L12 L13 L14
R30 R31 R32 R33 R34 R35 R36 R37
R38 R39 R40 R41 R42 R43 R44 R45
C51 C52 C53 C54 C55 C56 C57 C58
-16 ns CLOCK
-32 ns CLOCK
B71 A71 B67 A67 B78 A78 B74 A74
B88 A88 B85 A85 B103 A103 B99 A99
8 7 6 5 4 3 2 1
D C B A

NOTES:

1. C51,C52,C53,C54,C55,C56,C57,C58 ARE 1500 pF.
2. L7,L8,L9,L10,L11,L12,L13,L14 ARE 27μH.
3. R30,R31,R32,R33,R34,R35,R36,R37 ARE 56Ω.
4. CONNECTION OF JUMPER IS SHOWN ARBITRARILY; DURING TUNING PROCEDURE, JUMPER MAY BE CONNECTED TO ANY POSITION.
5. R38,R39,R40,R41,R42,R43,R44,R45, ARE 560Ω.
6. CABLE CONNECTION.
7. NO TERMINATION, DELAY LINE IS TERMINATED.
8. 73Ω CHARACTERISTIC IMPEDANCE.
9. LINES BETWEEN 10192 CIRCUITS AND CONNECTORS SHALL BE OF EQUAL LENGTH WITH A TOLERANCE OF ±0.25 INCH.

CONTROL DATA CORPORATION ARDEN HILLS OPERATIONS	MASTER CLOCK RESYNCHRONIZER AND FANOUT 4UEH; A14 AD112-C	CODE IDENT 34010	D	DWG NO 60458190 CLK 4.1-03 SHEET 19-11	REV N



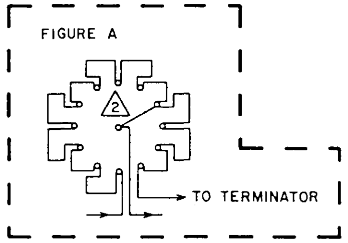
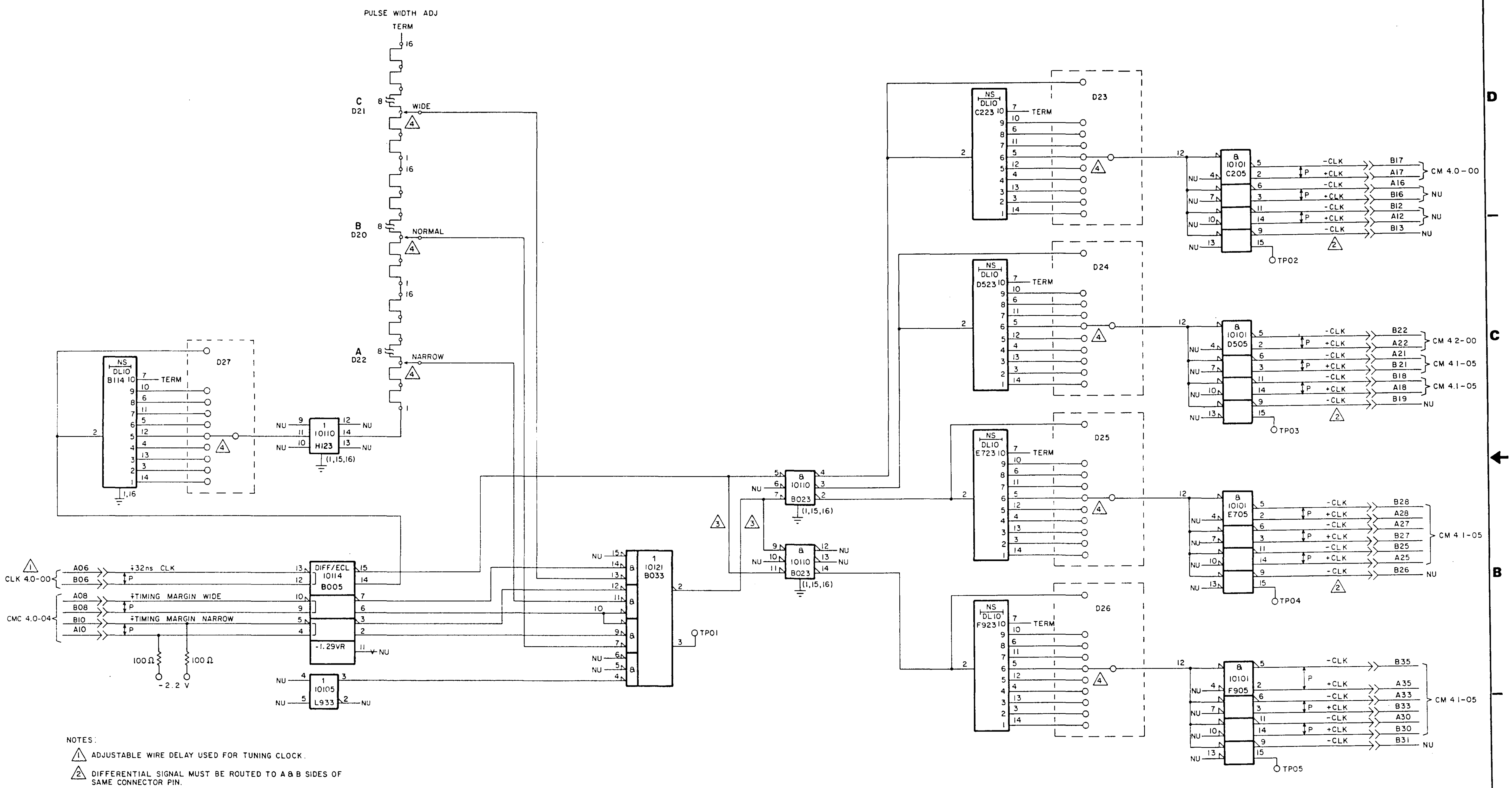


FIGURE A

NOTES:

1. SEE FIGURE A.
2. CONNECTION OF JUMPER IS SHOWN ARBITRARILY; DURING TUNING PROCEDURE JUMPER MAY BE CONNECTED TO ANY POSITION.
3. C59,C60,C61,C62 ARE 1500 PF.
4. L15,L16,L17,L18 ARE 27μH.
5. R46,R47,R48,R49 ARE 56Ω.
6. R50,R51,R52,R53 ARE 560Ω.
7. CABLE CONNECTION.
8. NO TERMINATION, DELAY LINE IS TERMINATED.
9. 73Ω CHARACTERISTIC IMPEDANCE.
10. LINES BETWEEN 10192 CIRCUITS AND CONNECTORS SHALL BE OF EQUAL LENGTH WITH A TOLERANCE OF ±0.25 INCH.

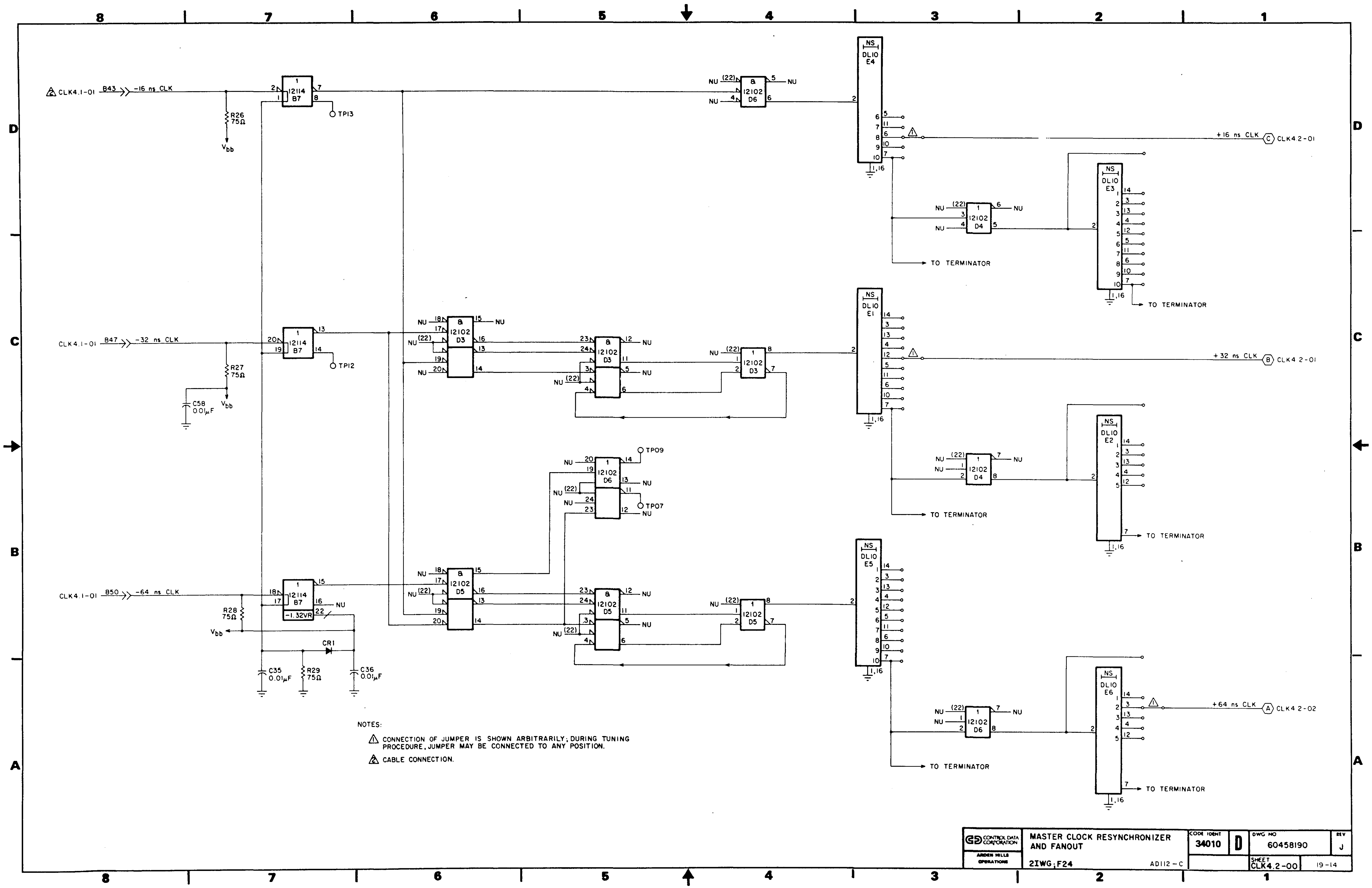
CONTROL DATA CORPORATION	MASTER CLOCK RESYNCHRONIZER AND FANOUT	CODE IDENT 34010	D	DWG NO 60458190	REV N
ARDEN HILLS OPERATIONS	4UEH; A14 AD112-C			CLK 4.1-04 SHEET	19-12



NOTES:

1. ADJUSTABLE WIRE DELAY USED FOR TUNING CLOCK.
2. DIFFERENTIAL SIGNAL MUST BE ROUTED TO A & B SIDES OF SAME CONNECTOR PIN.
3. AS SHORT AS POSSIBLE; ORDER OF ROUTING SHOULD BE
   B005-15 → B023-5 → B023-11
   B033-02 → B023-9 → B023-7
4. CONNECTION OF JUMPER IS SHOWN ARBITRARILY; DURING TUNING PROCEDURE JUMPER MAY BE CONNECTED TO ANY POSITION.

CONTROL DATA CORPORATION ARDEN HILLS OPERATIONS	LEVEL 4 DIAGRAM CM 3.0 2ND STAGE CLOCK SHAPER 4UEH; A14 AD112-C	CODE IDENT 34010 D	DWG NO 60458190 REV N SHEET CLK 4.1-05 19-13



NOTES:

⚠ CONNECTION OF JUMPER IS SHOWN ARBITRARILY; DURING TUNING PROCEDURE, JUMPER MAY BE CONNECTED TO ANY POSITION.

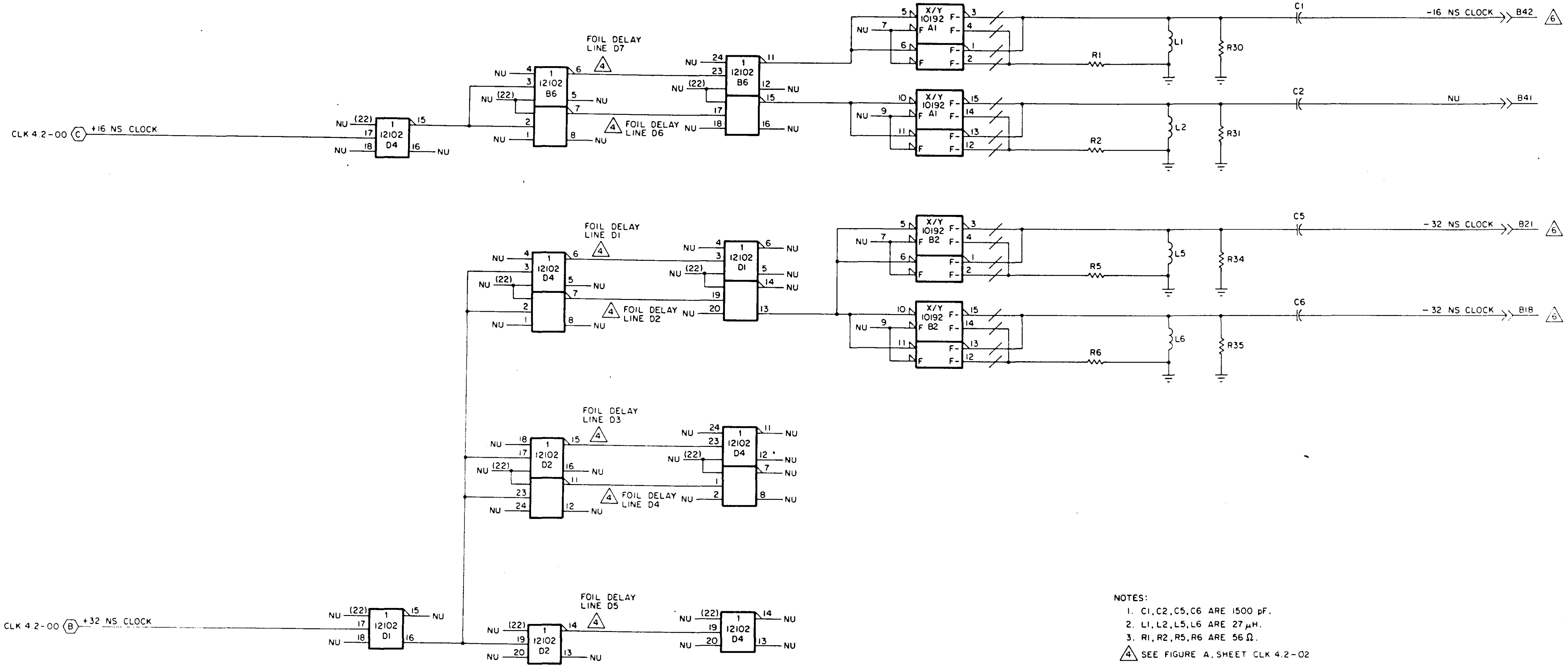
⚠ CABLE CONNECTION.

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

MASTER CLOCK RESYNCHRONIZER AND FANOUT

2IWG;F24 AD112-C

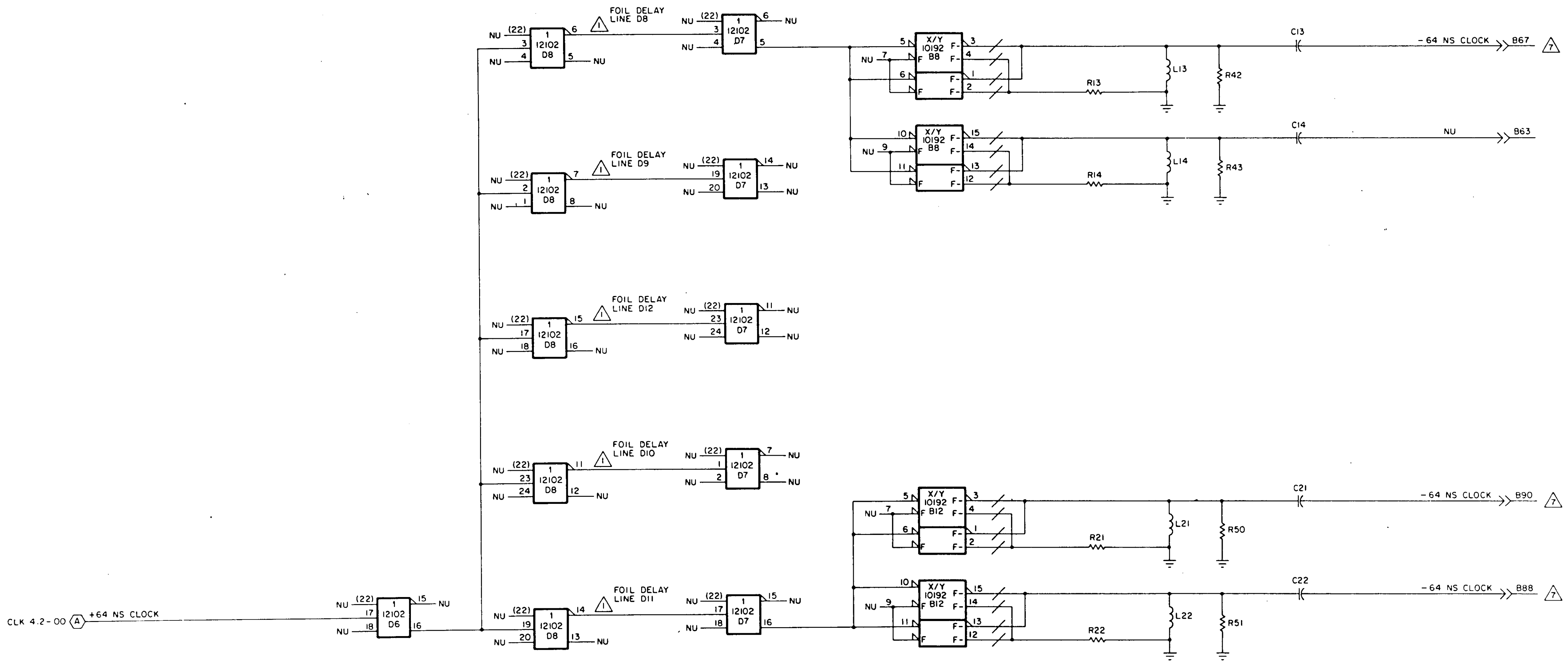
CODE IDENT		DWG NO	REV
34010	D	60458190	J
		SHEET CLK4.2-00	19-14



NOTES:

1. C1, C2, C5, C6 ARE 1500 pF.
2. L1, L2, L5, L6 ARE 27 μH.
3. R1, R2, R5, R6 ARE 56 Ω.
4. SEE FIGURE A, SHEET CLK 4.2-02
5. R30, R31, R34, R35 ARE 560 Ω.
6. CABLE CONNECTION.

CONTROL DATA CORPORATION ARDEN HILLS OPERATIONS	MASTER CLOCK RESYNCHRONIZER AND FANOUT 2IWG ; F24 AD112-C	CODE IDENT 34010	D	DWG NO 60458190 SHEET CLK 4.2-01	REV J 19-15



NOTES:

1. SEE FIGURE A.
2. CONNECTION OF JUMPER IS SHOWN ARBITRARILY; DURING TUNING PROCEDURE JUMPER MAY BE CONNECTED TO ANY POSITION.
3. C13, C14, C21, C22 ARE 1500 pF.
4. L13, L14, L21, L22 ARE 27 μH.
5. R13, R14, R21, R22 ARE 56 Ω.
6. R42, R43, R50, R51 ARE 560 Ω.
7. CABLE CONNECTION.

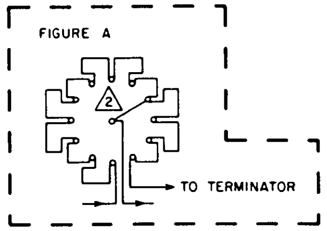


FIGURE A

CONTROL DATA CORPORATION
ARDEN HILLS OPERATIONS

MASTER CLOCK RESYNCHRONIZER AND FANOUT

21WG ; F24

AD112-C

CODE IDENT 34010

D

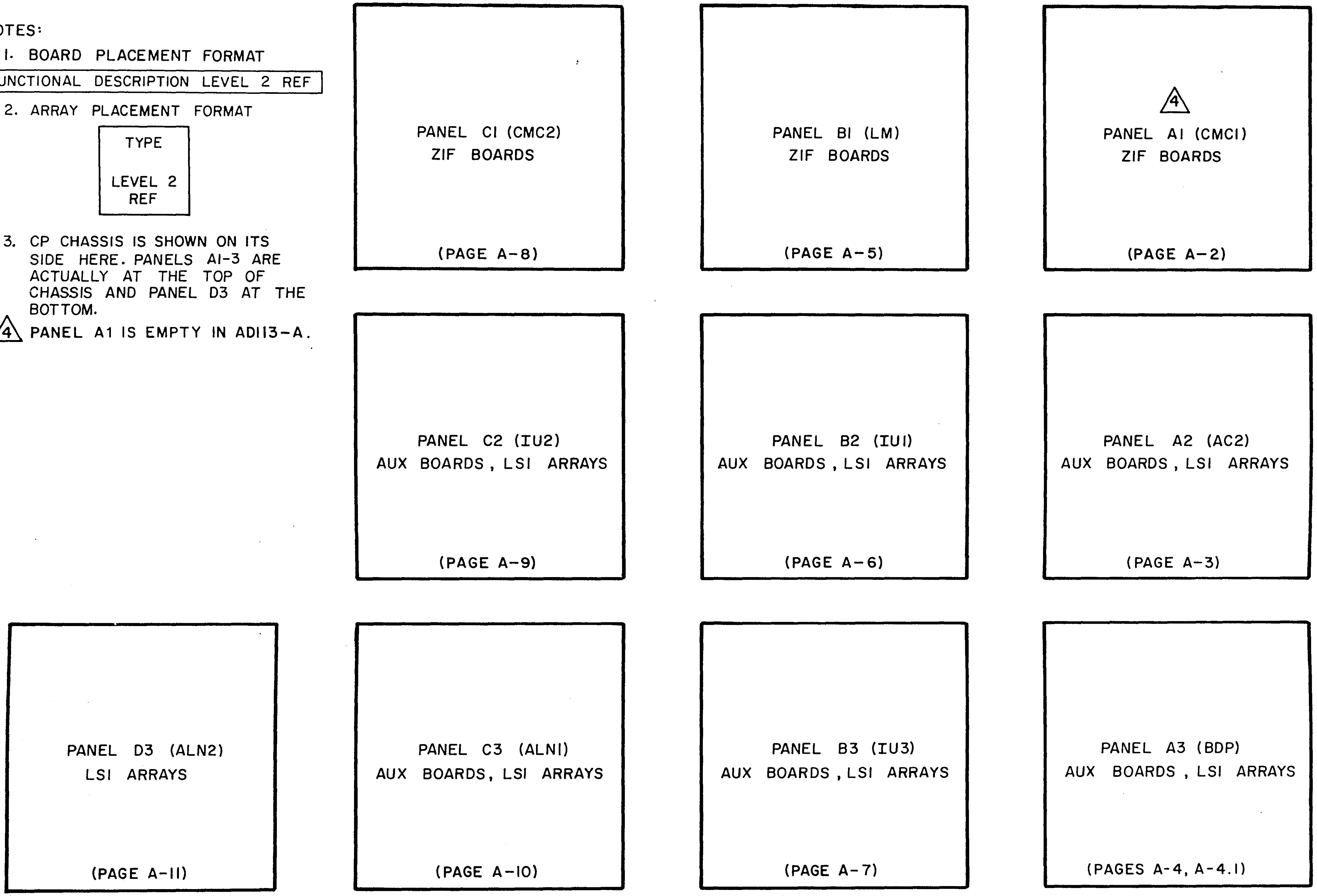
DWG NO 60458190

REV J

SHEET CLK 4.2-02

19-16

CP AND CM CHASSIS MAPS



NOTES:

1. BOARD PLACEMENT FORMAT

TYPE FUNCTIONAL DESCRIPTION LEVEL 2 REF

2. ARRAY PLACEMENT FORMAT

TYPE
LEVEL 2
REF

3. CP CHASSIS IS SHOWN ON ITS SIDE HERE. PANELS A1-3 ARE ACTUALLY AT THE TOP OF CHASSIS AND PANEL D3 AT THE BOTTOM.

△4 PANEL A1 IS EMPTY IN AD113-A.

Figure A-1-1. CP Chassis Map

A	7BTH	MAINTENANCE REGISTERS	CMC 2.1
B	8DAH	BOUNDS FAULT DETECTOR, FREE RUNNING COUNTER	
C	7BTH	MAINTENANCE REGISTERS	↓
D	3BSH △1	MAINTENANCE REGISTERS	CMC 2.1
E	7BPH	INPUT PORTS	CMC 2.0
F	7BPH	INPUT PORTS	
G	7BPH	INPUT PORTS	↓
H	7BPH	INPUT PORTS	CMC 2.0
J	7BUH	FUNCTION, TRANSLATOR AND CONTROL DELAY, PARITY ERROR CODE GENERATOR	CMC 2.1
K	7BRH	CONFLICT AND BANK/COMMON MEMORY BUSY CONTROL	CMC 2.0
L	7BPH	INPUT PORTS	
M	7BPH	INPUT PORTS	
N	7BPH	INPUT PORTS	
P	7BPH	INPUT PORTS	
R	7BPH	INPUT PORTS	
S	7BYH	WRITE ECC GENERATOR	
T	7BYH	WRITE ECC GENERATOR	
U	7BWH	READ DATA PATH AND SECDED	↓
V	7BWH	READ DATA PATH AND SECDED	CMC 2.0
W	7BMH	16ns CLOCK PULSE SHAPER	CLK 2.0

NOTES:

△1 AD112-C/S USES 3BSH.
AD112-A/B USES 7BSH.

Figure A-1-2. CP Panel A1 (CMC1)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	12CD AC 2.3	12CD AC 2.3	12CD AC 2.3	12CD AC 2.3		12CE AC 2.0	12CE AC 2.0	12CE AC 2.0	12SC AC 2.0	12SC AC 2.0	12SC AC 2.0	12CB AC 2.0	12CB AC 2.0	12CB AC 2.0	12IHB AC 2.0 12IHB AC 2.0
B	12CD AC 2.3	12CD AC 2.3	12CD AC 2.3	12CD AC 2.3	12CS AC 2.0	12CE AC 2.0	12CE AC 2.0	12CE AC 2.0	12SC AC 2.0	12SC AC 2.0	12SC AC 2.0	12SC AC 2.0	12CB AC 2.0	12CB AC 2.0	12SI AC 2.0
C	12CU AC 2.2	12CU AC 2.2	12IHF AC 2.3 12IHF AC 2.3	12CB AC 2.0	12CS AC 2.0	12CS AC 2.0	12CE AC 2.0	12CE AC 2.0	12SC AC 2.0	12SC AC 2.0	12SC AC 2.0	12CS AC 2.0	12CB AC 2.0	12CB AC 2.0	12CB AC 2.0
D		12IHF AC 2.2 12IHF AC 2.0	12IHF AC 2.0 12IHF AC 2.0	12CN AC 2.2	12CN AC 2.2	12CN AC 2.2	12IHF AC 2.0 12IHB AC 2.0	12CE AC 2.0	12CU AC 2.0	12IHB AC 2.0 12IHB AC 2.0	12CD AC 2.0	12IHF AC 2.0 12IHF AC 2.0	12CD AC 2.1	12IHB AC 2.1 12IHF AC 2.0	12CB AC 2.0
E	9DLH					SOFT CONTROL 2								AC 2.1	
	7ADH					PROCESSOR FAULT STATUS, CLOCK FANOUT								CLK 2.0, MAC 2.0	
F	9EKH					B STREAM CONTROL								AC 2.1	
	0EJH					A STREAM CONTROL								AC 2.0	
G	9DLH					SOFT CONTROL 1								AC 2.1	
	7ADH					PROCESSOR FAULT STATUS, CLOCK FANOUT								CLK 2.0, MAC 2.0	
H	12CU AC 2.1		12IHF AC 2.0 	12CG AC 2.2	12IHF AC 2.0 12IHF AC 2.0	12CG AC 2.2	12CG AC 2.2	12IHB AC 2.0 12IHB AC 2.2	12IHF AC 2.0 12IHF AC 2.0	12IHF AC 2.0 12IHF AC 2.0	12IHF AC 2.0 12IHA AC 2.2	12CE AC 2.1	12CE AC 2.1	12CS AC 2.1	12CB AC 2.1
J	12CB AC 2.3	12CB AC 2.3	12CG AC 2.2	12CG AC 2.2	12CG AC 2.2	12CG AC 2.2	12CG AC 2.2	12IHB AC 2.2 12IHB AC 2.2	12SD AC 2.2	12CD AC 2.2	12CD AC 2.2	12CE AC 2.1	12CE AC 2.1	12CE AC 2.1	12CS AC 2.1
K	12CB AC 2.3	12CB AC 2.3	12CG AC 2.2	12CB AC 2.3	12CB AC 2.3	12CB AC 2.3	12CB AC 2.3	12CB AC 2.2	12CB AC 2.2	12IHB AC 2.0 12IHB AC 2.0	12IHA AC 2.2 12IHB AC 2.0	12CE AC 2.1	12CE AC 2.1	12CE AC 2.1	12CS AC 2.1

Figure A-1-3. CP Panel A2 (AC2)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	7CNH							EDIT							BDP 2.2
	4AFH △1							BDP RAM							BDP 2.3
B	4CLH △2							BDP PORT A							BDP 2.0
	4AFH △1							BDP RAM							BDP 2.3
C	4CLH △2							BDP PORT B							BDP 2.0
	9ESH							STREAM CONTROL							BDP 2.0
D	12CD BDP 2.0	12CT BDP 2.0		12CN BDP 2.1	12CN BDP 2.1	12CN BDP 2.1	12CT BDP 2.0	12CB BDP 2.1	12CT BDP 2.0	12CT BDP 2.0	12CU BDP 2.0	12CJ BDP 2.0	12CN BDP 2.1	12CN BDP 2.1	12CT BDP 2.0
E	12CS BDP 2.0	12CB BDP 2.0	121HD BDP 2.1 121HD BDP 2.1	121HD BDP 2.1 121HD BDP 2.1	12CD BDP 2.1	12CD BDP 2.1	121HD BDP 2.1 121HD BDP 2.1	121HD BDP 2.1 121HD BDP 2.1	121HD BDP 2.1 121HA BDP 2.0	12CU BDP 2.0	12SG BDP 2.0	12CT BDP 2.1	12CS BDP 2.1	12CB BDP 2.1	12CT BDP 2.0
F	12CD BDP 2.0	12CE BDP 2.1	12CT BDP 2.1	12CD BDP 2.1	12CD BDP 2.2	121HA BDP 2.0 121HB BDP 2.0	12CE BDP 2.2	12SC BDP 2.2	12CU BDP 2.0	12SD BDP 2.0	12CD BDP 2.0	12SG BDP 2.0	12CB BDP 2.2	12CT BDP 2.0	12CE BDP 2.1
G	12CU BDP 2.0	12CA BDP 2.0	121HB BDP 2.0 121HD BDP 2.2	121HD BDP 2.2 121HD BDP 2.2	121HD BDP 2.2 121HD BDP 2.2	12CD BDP 2.2	12CD BDP 2.2	121HD BDP 2.2 121HD BDP 2.2	121HD BDP 2.2 121HD BDP 2.2	121HD BDP 2.2 121HA BDP 2.0	12CT BDP 2.1	12SG BDP 2.0	12SG BDP 2.0	12SD BDP 2.0	12CU BDP 2.0
H	12CU BDP 2.0	12CU BDP 2.0	121HA BDP 2.0 121HD BDP 2.2	121HD BDP 2.2 121HD BDP 2.2	121HD BDP 2.2 121HD BDP 2.2	12CD BDP 2.2	12CD BDP 2.2	121HD BDP 2.2 121HD BDP 2.2	121HD BDP 2.2 121HD BDP 2.2	12CT BDP 2.0	12CD BDP 2.3	12CB BDP 2.3	12CB BDP 2.3	12CT BDP 2.0	12CT BDP 2.0
J	12CU BDP 2.0	12CU BDP 2.0	12CS BDP 2.0	12CU BDP 2.0	12SD BDP 2.0	12SD BDP 2.0	12SD BDP 2.1	12SD BDP 2.1	12CT BDP 2.1	121HC BDP 2.3 121HC BDP 2.3	121HC BDP 2.3 121HC BDP 2.3	121HC BDP 2.3 121HC BDP 2.3	12CD BDP 2.3	12CU BDP 2.0	12SD BDP 2.0
K	12CU BDP 2.0	12SD BDP 2.0	12SG BDP 2.0	12CU BDP 2.0	12SG BDP 2.0	12SG BDP 2.0	12SD BDP 2.0	12SG BDP 2.0		121HA BDP 2.0 121HA BDP 2.0	12CN BDP 2.3	12CN BDP 2.3	12CN BDP 2.3	12CN BDP 2.3	12CN BDP 2.3

NOTES:

△1 THE 7AFH BOARD HAS BEEN REPLACED BY 4AFH. THESE BOARDS ARE FUNCTIONALLY IDENTICAL AND INTERCHANGEABLE.

△2 THE 7CLH BOARD HAS BEEN REPLACED BY 4CLH. THESE BOARDS ARE FUNCTIONALLY IDENTICAL AND INTERCHANGEABLE.

Figure A-1-4. CP Panel A3 (BDP) (With 121HD Arrays)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	7CNH							EDIT							BDP 2.2
	4AFH △1							BDP RAM							BDP 2.3
B	4CLH △2							BDP PORT A							BDP 2.0
	4AFH △1							BDP RAM							BDP 2.3
C	4CLH △2							BDP PORT B							BDP 2.0
	9ESH							STREAM CONTROL							BDP 2.0
D	12CD BDP 2.0	12CT BDP 2.0		12CN BDP 2.1	12CN BDP 2.1	12CN BDP 2.1	12CT BDP 2.0	12CB BDP 2.1	12CT BDP 2.0	12CT BDP 2.0	12CU BDP 2.0	12CJ BDP 2.0	12CN BDP 2.1	12CN BDP 2.1	12CT BDP 2.0
E	12CS BDP 2.0	12CB BDP 2.0	12CV BDP 2.1	12CV BDP 2.1		12CD BDP 2.1	12CV BDP 2.1		121HA BDP 2.0	12CU BDP 2.0	12SG BDP 2.0	12CT BDP 2.1	12CS BDP 2.1	12CB BDP 2.1	12CT BDP 2.0
F	12CD BDP 2.0	12CE BDP 2.1	12CT BDP 2.1	12CD BDP 2.1	12CD BDP 2.2	121HA BDP 2.0 121HB BDP 2.0	12CE BDP 2.2	12SC BDP 2.2	12CU BDP 2.0	12SD BDP 2.0	12CD BDP 2.0	12SG BDP 2.0	12CB BDP 2.2	12CT BDP 2.0	12CE BDP 2.1
G	12CU BDP 2.0	12CA BDP 2.0	121HB BDP 2.0	12CV BDP 2.2	12CV BDP 2.2		12CD BDP 2.2	12CV BDP 2.2		121HA BDP 2.0	12CT BDP 2.1	12SG BDP 2.0	12SG BDP 2.0	12SD BDP 2.0	12CU BDP 2.0
H	12CU BDP 2.0	12CU BDP 2.0	121HA BDP 2.0	12CV BDP 2.2	12CV BDP 2.2		12CD BDP 2.2	12CV BDP 2.2		12CT BDP 2.0	12CD BDP 2.3	12CB BDP 2.3	12CB BDP 2.3	12CT BDP 2.0	12CT BDP 2.0
J	12CU BDP 2.0	12CU BDP 2.0	12CS BDP 2.0	12CU BDP 2.0	12SD BDP 2.0	12SD BDP 2.0	12SD BDP 2.1	12SD BDP 2.1	12CT BDP 2.1	121HC BDP 2.3 121HC BDP 2.3	121HC BDP 2.3 121HC BDP 2.3	121HC BDP 2.3 121HC BDP 2.3	12CD BDP 2.3	12CU BDP 2.0	12SD BDP 2.0
K	12CU BDP 2.0	12SD BDP 2.0	12SG BDP 2.0	12CU BDP 2.0	12SG BDP 2.0	12SG BDP 2.0	12SD BDP 2.0	12SG BDP 2.0		121HA BDP 2.0 121HA BDP 2.0	12CN BDP 2.3	12CN BDP 2.3	12CN BDP 2.3	12CN BDP 2.3	12CN BDP 2.3

NOTES:

△1 THE 7AFH BOARD HAS BEEN REPLACED BY 4AFH. THESE BOARDS ARE FUNCTIONALLY IDENTICAL AND INTERCHANGEABLE.

△2 THE 7CLH BOARD HAS BEEN REPLACED BY 4CLH. THESE BOARDS ARE FUNCTIONALLY IDENTICAL AND INTERCHANGEABLE.

Figure A-1-4.1. CP Panel A3 (BDP) (With 12CV Arrays)

A	7BGH		MAP CONTROL 2	LM 2.0 ↓
B	7BCH		PAGE MAP	
C	7BCH		PAGE MAP	
D	7BCH		PAGE MAP	
E	7BCH		PAGE MAP	
F	7BHH		TAGS/RESPONSE	
G	7BFH		MAP CONTROL 1	
H	3BBH	△2	CACHE TAG	
J	3BBH	△2	CACHE TAG	
K	3BBH	△1 △2	CACHE TAG	
L	3BBH	△1 △2	CACHE TAG	
M	7BEH		CACHE ALLOCATE	
N	5BAH	△3	CACHE DATA RAM	
P	5BAH	△3	CACHE DATA RAM	
R	5BAH	△1 △3	CACHE DATA RAM	
S	5BAH	△1 △3	CACHE DATA RAM	
T	7BJH		LM DATA	
U	7BJH		LM DATA	
V	7BJH		LM DATA	
W	7BJH		LM DATA	LM 2.0

NOTES:

△1 OPTIONAL CACHE MEMORY EXPANSION BOARD.

△2 3BBH AND 7BBH ARE INTERCHANGEABLE ON AD112-A/B.

△3 5BAH AND 7BAH ARE FUNCTIONALLY IDENTICAL AND INTERCHANGEABLE.

Figure A-1-5. CP Panel B1 (LM)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	12CD OPI 2.5	12CT OPI 2.0	12IHA OPI 2.5 12IHA OPI 2.5	12CS OPI 2.5	12CS OPI 2.5	12CS OPI 2.5	12CS OPI 2.5	12CU OPI 2.0	12CS OPI 2.5	12CS OPI 2.5	12CS OPI 2.5	12CS OPI 2.5	12CD OPI 2.5	12CD OPI 2.5	12CD OPI 2.5
B	12CD OPI 2.5	12CD OPI 2.5	12CD OPI 2.5	12CD OPI 2.5		12IHF OPI 2.0 12IHF OPI 2.0	12CS AC 2.3	12CS AC 2.3	12CU AC 2.3	12CU AC 2.3	12CT OPI 2.0	12IHA SM 2.0 12IHB OPI 2.0	12CU OPI 2.5	12CU OPI 2.5	12CD OPI 2.5
C	7CPH						LIVE REGISTER							OPI 2.4	
	7ADH						PROCESSOR FAULT STATUS, CLOCK FANOUT							MAC 2.0, CLK 2.0	
D	7CPH						LIVE REGISTER							OPI 2.4	
E	7AEH						PVA REGISTER							SM 2.0	
	7CGH						SEGMENT MAP CONTROL							↓	
F	7AEH						PVA REGISTER							SM 2.0	
	7CRH						ADDRESS MUX 1							LM 2.0	
G	7CSH						ADDRESS MUX 2							↓	
	7CQH						LM CONTROL							LM 2.0	
H	7CBH						COMPLETE							ICC 2.0	
	7CAH						ICP BUFFER							ICP 2.0	
J	9DKH						VALID CONTROL, RESPONSE							ICP 2.0, ICC 2.0	
	7CAH						ICP BUFFER							ICP 2.0	
K	7CDH						MASK/CONDITION REGISTERS							ICC 2.0	
	7CAH						ICP BUFFER							ICP 2.0	

Figure A-1-6. CP Panel B2 (IU1)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	8DDH						REGISTER FILE								OPI 2.1
	8DDH						REGISTER FILE								OPI 2.1
B	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CB OPI 2.0	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3
C	12CT OPI 2.0	12CS OPI 2.1	12CT OPI 2.0	12CT OPI 2.0	12CP OPI 2.3	12CP OPI 2.3	12SG OPI 2.0	12SG OPI 2.0	12SG OPI 2.0	12CP OPI 2.3	12CP OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12SD OPI 2.0	12CF OPI 2.3
D	12CF OPI 2.3	12CT OPI 2.0	12IHB OPI 2.0 12IHB OPI 2.0	12CT OPI 2.0	12IHA OPI 2.3 12IHA OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12IHB OPI 2.0 12IHA OPI 2.0	12CP OPI 2.0	12CP OPI 2.0	12IHF OPI 2.0 12IHB OPI 2.0	12CF OPI 2.3	12SD OPI 2.3	12CF OPI 2.3	12CU OPI 2.0
E	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12CF OPI 2.3	12SD OPI 2.3	12CF OPI 2.3
F	12SD OPI 2.4	12SG OPI 2.0	12IHA OPI 2.0 12IHA OPI 2.0	12IHA OPI 2.0 12IHA OPI 2.2	12IHA OPI 2.3 12IHA OPI 2.3	12IHB OPI 2.0 12IHB OPI 2.0	12CU OPI 2.0	12CU OPI 2.0	12SG OPI 2.0	12CU OPI 2.0	12IHA OPI 2.0 12IHA OPI 2.0	12CD OPI 2.3	12SD OPI 2.3	12IHB OPI 2.0 12IHB OPI 2.0	12SD OPI 2.3
G	12IHA OPI 2.0 12IHB OPI 2.2	12CT OPI 2.0	12SG OPI 2.0	12IHF OPI 2.0 12IHF OPI 2.0	12CB OPI 2.1	12SD OPI 2.0	12CS OPI 2.1	12CS OPI 2.1	12CS OPI 2.1	12CU OPI 2.1	12IHA OPI 2.0	12CB OPI 2.0	12SD OPI 2.3	12IHA OPI 2.3 12IHA OPI 2.0	
H	12IHA OPI 2.0 12IHA OPI 2.2	12IHA OPI 2.0 12IHB OPI 2.2	12IHA OPI 2.2 12IHA OPI 2.2	12CU OPI 2.0	12CB OPI 2.1	12CB OPI 2.1	12CS OPI 2.1	12CS OPI 2.1	12CS OPI 2.1	12CU OPI 2.1	12CS OPI 2.5	12CS OPI 2.5	12CS OPI 2.5		
J	12CS OPI 2.2	12CS OPI 2.2	12CE OPI 2.2	12CS OPI 2.2	12CS OPI 2.2	12CB OPI 2.1	12CS OPI 2.1	12CS OPI 2.1	12CS OPI 2.1	12CE OPI 2.2	12CS OPI 2.5	12CS OPI 2.5	12CS OPI 2.5		
K	12SI OPI 2.1	12CS OPI 2.2	12CE OPI 2.2	12CS OPI 2.2	12CS OPI 2.2	12CB OPI 2.1	12CS OPI 2.1	12CS OPI 2.1	12CS OPI 2.1	12CE OPI 2.2	12CS OPI 2.5	12CS OPI 2.5	12CS OPI 2.5	12IHA OPI 2.0 12IHA OPI 2.0	12CU OPI 2.5

Figure A-1-7. CP Panel B3 (IU3)

A	3BDH △5	CONTROL STORE RAM AND PARITY CHECK	CST 2.0
B	3BDH △5	CONTROL STORE RAM AND PARITY CHECK	↓
C	4BNH △4	CONTROL STORE CONTROL	CST 2.0
D	5BKH △6	MAC INTERFACE	MAC 2.0
E	7BZH	MAINTENANCE CHANNEL INTERFACE	MAC 2.0
F			
G	7BQH △2	OUTPUT PORTS	CMC 2.0
H	7BQH △3	OUTPUT PORTS	↓
J	7BQH △1	OUTPUT PORTS	↓
K	7BQH △1	OUTPUT PORTS	CMC 2.0
L	3BVH(AD112-C/S), OBVH(AD112-A/B) △1	REFRESH ADDRESS GENERATOR	CMC 2.1
M	7BQH △1	OUTPUT PORTS	CMC 2.0
N	7BQH △1	OUTPUT PORTS	↓
P	7BQH △1	OUTPUT PORTS	↓
R	7BQH △1	OUTPUT PORTS	↓
S	7BQH △1	OUTPUT PORTS	↓
T	7BXH △1	PARTIAL WRITE NETWORK	↓
U	7BXH △1	PARTIAL WRITE NETWORK	↓
V	7BYH △1	PARTIAL WRITE ECC GENERATOR	↓
W	7BYH △1	PARTIAL WRITE ECC GENERATOR	CMC 2.0

NOTES:

△1 IN AD113-A THIS SLOT IS EMPTY.

△2 IN AD113-A TERMINATOR BOARD 41XG REPLACES 7BQH.

△3 IN AD113-A THE 7BMH BOARD REPLACES 7BQH AND PROVIDES 1st STAGE CLOCK FUNCTIONS.

△4 AD112-A/B USES A 7BNH BOARD WITH ONLY 2K WORDS OF MEMORY.

△5 AD112-A/B USES 7BDH OR 3BDH.

△6 5BKH AND 7BKH ARE FUNCTIONALLY IDENTICAL AND INTERCHANGEABLE.

Figure A-1-8. CP Panel C1 (CMC2)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	5CEH △1					IF BUFFER								IF 2.0	
	7CFH					IF CONTROL								IF 2.1	
B	5CEH △1					IF BUFFER								IF 2.0	
	7ADH					PROCESSOR FAULT STATUS, CLOCK FANOUT								MAC 2.0, CLK 2.0	
C	12IHA IF 2.0	12CB IF 2.0	12CD IF 2.1	12CS IF 2.0	12CS IF 2.0	12IHB IF 2.1	12IHB IF 2.1 12IHB IF 2.1	12CD IF 2.1	12CA IF 2.1	12CS IF 2.1	12CB IF 2.1	12CB IF 2.1	12CU IF 2.0	12CU IF 2.0	12CD IF 2.1
D		12CB IF 2.0	12CU IF 2.0	12CS IF 2.0	12CS IF 2.0	12CU IF 2.0	12CD IF 2.1	12CD IF 2.1	12CS IF 2.1	12CS IF 2.1	12CB IF 2.1	12CB IF 2.1	12CA IF 2.1	12CU IF 2.1	12CD IF 2.1
E		12CU IF 2.0	12CU IF 2.0	12CS IF 2.0	12CS IF 2.0	12CS IF 2.0	12CS IF 2.0	12CS IF 2.0	12CS IF 2.1	12CU IF 2.0	12IHA IF 2.1 12IHA IF 2.1	12CB IF 2.1	12CA IF 2.1	12CU IF 2.1	12CD IF 2.1
F		12CU IF 2.0	12CU IF 2.0	12CS IF 2.0	12CU IF 2.0	12CU IF 2.0	12CS IF 2.0	12CS IF 2.0		12CU IF 2.0	12CB IF 2.1	12CB IF 2.1	12CA IF 2.1	12SC IF 2.1	
G	12IHB CST 2.0 12IHB CST 2.0	12CU CST 2.0	12IHB CST 2.0 12IHB CST 2.0	12IHB CST 2.0 12IHB CST 2.0	12CU CST 2.0	12IHB CST 2.0 12IHB CST 2.0	12IHB CST 2.0 12IHB CST 2.0	12CS CST 2.0	12IHB CST 2.0 12IHB CST 2.0	12IHB CST 2.0 12IHB CST 2.0	12CU CST 2.0	12IHB CST 2.0 12IHB CST 2.0	12IHB CST 2.0 12IHB CST 2.0	12CU CST 2.0	12IHB CST 2.0 12IHB CST 2.0
H	12CD OPI 2.4	12CU CST 2.0	12CT OPI 2.4	12CU OPI 2.4	12CU CST 2.0	12CU CST 2.0		12IHB CST 2.0 12IHB CST 2.0	12IHB CST 2.0 12IHB CST 2.0	12CB CST 2.0	12CU CST 2.0	12CB CST 2.0	12CU CST 2.0	12CU CST 2.0	
J	12CD OPI 2.4	12CD OPI 2.4	12IHA OPI 2.4 12IHB OPI 2.4	12SD CST 2.0	12SD CST 2.0	12SD CST 2.0	12CS CST 2.0	12CS CST 2.0	12CS CST 2.0	12SD CST 2.0	12SD CST 2.0	12SD CST 2.0	12CT OPI 2.0	12CE OPI 2.0	12IHF OPI 2.0
K	9DLH					SOFT CONTROL								ALN 2.0	
	7ADH					PROCESSOR FAULT STATUS, CLOCK FANOUT								MAC 2.0, CLK 2.0	

NOTES:

△1 THE 7CEH BOARD HAS BEEN REPLACED BY THE 5CEH BOARD.
THESE BOARDS ARE FUNCTIONALLY IDENTICAL AND INTERCHANGEABLE.

Figure A-1-9. CP Panel C2 (IU2)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	12CM ALN 2.1	12CM ALN 2.1	12CM ALN 2.1	12CM ALN 2.1	12CM ALN 2.1	12CM ALN 2.1	12CL ALN 2.1	12CL ALN 2.1	12CU ALN 2.0	12CL ALN 2.2	12CL ALN 2.2	12CK ALN 2.2	12IHB ALN 2.2 12IHB ALN 2.2	12IHB ALN 2.1 12IHB ALN 2.1	12IHB ALN 2.0 12IHB ALN 2.2
B	12CM ALN 2.1	12CM ALN 2.1	12CM ALN 2.1	12CM ALN 2.1	12CM ALN 2.1	12CM ALN 2.1	12CL ALN 2.1	12CH ALN 2.0	12CU ALN 2.0	12CL ALN 2.2	12CH ALN 2.0	12CA ALN 2.2	12IHB ALN 2.2 12IHB ALN 2.2	12CK ALN 2.2	12CK ALN 2.2
C	12CM ALN 2.1	12CM ALN 2.1	12CM ALN 2.1	12CM ALN 2.1	12CU ALN 2.0	12IHB ALN 2.0 12IHB ALN 2.0	12CL ALN 2.1	12CL ALN 2.1	12CL ALN 2.2	12CL ALN 2.2	12IHA ALN 2.0 12IHA ALN 2.0	12CT ALN 2.0	12IHB ALN 2.1 12IHB ALN 2.0	12CK ALN 2.2	12CK ALN 2.2
D	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12IHB ALN 2.1 12IHB ALN 2.0	12IHB ALN 2.1 12IHB ALN 2.1	12CS ALN 2.2	12CS ALN 2.2	12CT ALN 2.3	12CS ALN 2.2		12CU ALN 2.0	12CU ALN 2.0
E	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12IHB ALN 2.1 12IHB ALN 2.0	12IHB ALN 2.0 12IHB ALN 2.0	12IHB ALN 2.0 12IHB ALN 2.0	12CS ALN 2.3	12CS ALN 2.3	12CS ALN 2.3	12CS ALN 2.3	12CU ALN 2.0	12CM ALN 2.3	12CM ALN 2.3
F	12IHB ALN 2.0 12IHB ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CA ALN 2.3	12CA ALN 2.3	12CS ALN 2.3	12CS ALN 2.3	12CS ALN 2.3	12CS ALN 2.3	12CU ALN 2.0	12CM ALN 2.3	12CM ALN 2.3
G	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CA ALN 2.3	12CA ALN 2.3	12CA ALN 2.3	12CA ALN 2.3	12CA ALN 2.3	12CU ALN 2.0	12CU ALN 2.0	12CM ALN 2.3	12CM ALN 2.3
H	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CT ALN 2.3	12CH ALN 2.0	12CH ALN 2.0	12CA ALN 2.3	12CU ALN 2.0	12CS ALN 2.2	12CS ALN 2.2	12CM ALN 2.3	12CM ALN 2.3
J	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CC ALN 2.1	12CA ALN 2.3	12CA ALN 2.3	12CA ALN 2.3	12CA ALN 2.3	12IHB ALN 2.1 12IHF ALN 2.0	12CM ALN 2.3	12CM ALN 2.3	12CM ALN 2.3	12CM ALN 2.3
K	7CMH ALN CONTROL ALN 2.0 7CJH EXPONENT CONTROL ALN 2.6														

Figure A-1-10. CP Panel C3 (ALN1)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	12CE ALN 2.0	12CS ALN 2.5	12CA ALN 2.0	12IHB ALN 2.0					12CT ALN 2.0	12CB ALN 2.0	12CT ALN 2.0	12CS ALN 2.5	12CS ALN 2.5	12CS ALN 2.5	12CS ALN 2.5
B	12CB ALN 2.0	12CB ALN 2.5	12CT ALN 2.0	12CE ALN 2.0	12CB ALN 2.4	12CB ALN 2.4	12CB ALN 2.4	12CB ALN 2.4	12CE ALN 2.0	12CB ALN 2.4	12CS ALN 2.5	12CS ALN 2.5	12CS ALN 2.5	12CS ALN 2.5	12CS ALN 2.5
C	12CE ALN 2.0	12CT ALN 2.0	12CR ALN 2.5	12CT ALN 2.0	12CB ALN 2.4	12CB ALN 2.4	12CB ALN 2.4	12CB ALN 2.4	12SG ALN 2.0	12IHB ALN 2.0 12IHB ALN 2.0		12CJ ALN 2.6	12CB ALN 2.0	12CB ALN 2.0	12IHB ALN 2.0 12IHB ALN 2.0
D	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CB ALN 2.4	12CB ALN 2.0	12CI ALN 2.6	12CB ALN 2.0	12CB ALN 2.0	12IHB ALN 2.0 12IHB ALN 2.0
E	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CB ALN 2.4	12CB ALN 2.4	12SG ALN 2.0	12CI ALN 2.6	12CI ALN 2.6	12CD ALN 2.5
F	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CB ALN 2.4	12CB ALN 2.4	12CI ALN 2.6	12CI ALN 2.6	12CI ALN 2.6	12CI ALN 2.6
G	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CQ ALN 2.4	12CB ALN 2.4	12CB ALN 2.4	12CI ALN 2.6	12CH ALN 2.0	12CI ALN 2.6	12CH ALN 2.0
H	12CR ALN 2.5	12CR ALN 2.5	12CR ALN 2.5	12CR ALN 2.5	12CR ALN 2.5	12CR ALN 2.5	12CR ALN 2.5	12CR ALN 2.5	12CR ALN 2.5	12CR ALN 2.5	12CB ALN 2.4	12CI ALN 2.6	12CE ALN 2.0	12CI ALN 2.6	12CI ALN 2.6
J	12CH ALN 2.0	12CR ALN 2.5	12CR ALN 2.5	12CR ALN 2.5	12CR ALN 2.5	12CR ALN 2.5	12CR ALN 2.5	12CR ALN 2.5	12CR ALN 2.5	12CR ALN 2.5	12CB ALN 2.4	12CI ALN 2.6	12CI ALN 2.6	12IHB ALN 2.0	12CI ALN 2.6
K	12CA ALN 2.5	12CA ALN 2.5	12CA ALN 2.5	12CA ALN 2.5	12CA ALN 2.5	12CA ALN 2.5	12CA ALN 2.5	12CA ALN 2.5	12CA ALN 2.5	12CA ALN 2.0	12CB ALN 2.4	12CH ALN 2.0	12CI ALN 2.6	12CA ALN 2.0	12CI ALN 2.6

Figure A-1-11. CP Panel D3 (ALN2)

PANEL E

1						
2						
3						
4	7EDH	BANK 0	QUAD 0 (524K)	MEMORY BYTES 4-7		CM 2.0
5		1				
6		2				
7	7EDH	3				
8	7EHH	0	QUAD 1 (1049K)			
9		1				
10		2				
11		3				
12		0	QUAD 2 (1573K)			
13		1				
14		2				
15		3				
16		0	QUAD 3 (2097K)			
17		1				
18		2				
19	7EHH	BANK 3				CM 2.0
20						
21						
22	7UBH	DATA INTERFACE, BYTE 4				CM 2.0
23	7UBH	DATA INTERFACE, BYTE 5				
24	7UAH	ADRS/CONT INTFC, BANKS 0-3, BYTES 4-7				CM 2.0

PANEL C

1		
2		
3		
4		
5		
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11		
12		
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20		
21		
22		
23		
24		

PANEL A

1					
2					
3					
4	7EDH	BANK 0	QUAD 0 (524K)	MEMORY BYTES 0-3	CM 2.0
5		1			
6		2			
7	7EDH	3			
8	7EHH	0	QUAD 1 (1049K)		
9		1			
10		2			
11		3			
12		0	QUAD 2 (1573K)		
13		1			
14		2			
15		3			
16		0	QUAD 3 (2097K)		
17		1			
18		2			
19	7EHH	BANK 3			CM 2.0
20					
21					
22	7UBH	DATA INTERFACE, BYTE 0			CM 2.0
23	7UBH	DATA INTERFACE, BYTE 1			
24	7UAH	ADRS/CONT INTFC, BANKS 0-3, BYTES 0-3			CM 2.0

PANEL F

1	7UAH	ADRS/CONT INTFC, BANKS 4-7, BYTES 4-7			CM 2.0
2	7UBH	DATA INTERFACE, BYTE 6			
3	7UBH	DATA INTERFACE, BYTE 7			
4	7UCH	ADRS BITS 8-15,24-28/PAR 1,3 & SW FN0			CM 2.0
5					
6	7EHH	BANK 4	QUAD 3 (2097K)	MEMORY BYTES 4-7	CM 2.0
7		5			
8		6			
9		7			
10		4	QUAD 2 (1573K)		
11		5			
12		6			
13		7			
14		4	QUAD 1 (1049K)		
15		5			
16		6			
17	7EHH	7			
18	7EDH	4	QUAD 0 (524K)		
19		5			
20		6			
21	7EDH	BANK 7			CM 2.0
22					
23	7UEH	MASTER CLOCK OSCILLATOR			CLK 2.0
24	2IWG	MASTER CLOCK RESYNC AND FN0			CLK 2.0

PANEL D

1		
2		
3		
4		
5		
6		
7		
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21		
22		
23		
24		

PANEL B

1	7UAH	ADRS/CONT INTFC, BANKS 4-7, BYTES 0-3			CM 2.0
2	7UBH	DATA INTERFACE, BYTE 2			
3	7UBH	DATA INTERFACE, BYTE 3			
4	7UDH	ADRS BITS 16-23/PAR 2 AND CLK FNO			CM 2.0
5					
6	7EHH	BANK 4	QUAD 3 (2097K)	MEMORY BYTES 0-3	CM 2.0
7		5			
8		6			
9		7			
10		4	QUAD 2 (1573K)		
11		5			
12		6			
13		7			
14		4	QUAD 1 (1049K)		
15		5			
16		6			
17	7EHH	7			
18	7EDH	4	QUAD 0 (524K)		
19		5			
20		6			
21	7EDH	BANK 7			CM 2.0
22					
23					
24					

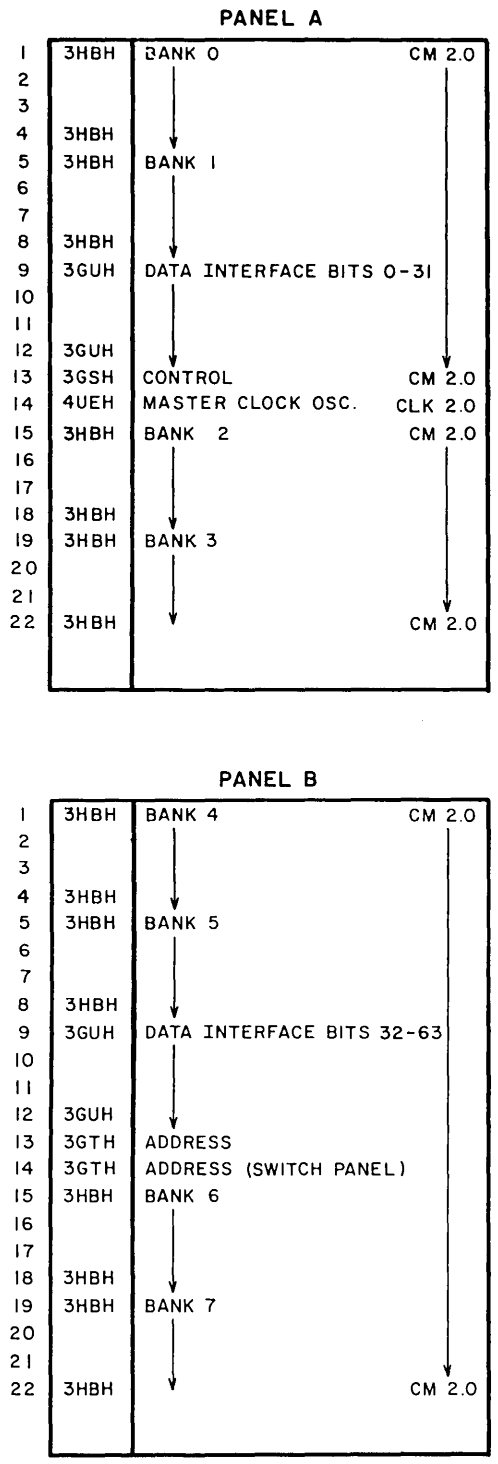
NOTES:

1. BOARD PLACEMENT FORMAT

TYPE	FUNCTIONAL DESCRIPTION	LEVEL 2 REF

2. CM CHASSIS IS SHOWN ON ITS SIDE. PANELS A AND B ARE ACTUALLY AT THE TOP OF CHASSIS AND E AND F ARE AT THE BOTTOM.

Figure A-2-1. CM (BS137-A) Chassis Map (Models 845 and 855 only)



PANEL A

1	3HBH	BANK 0	CM 2.0
2			
3			
4	3HBH		
5	3HBH	BANK 1	
6			
7			
8	3HBH		
9	3GUH	DATA INTERFACE BITS 0-31	
10			
11			
12	3GUH		
13	3GSH	CONTROL	CM 2.0
14	4UEH	MASTER CLOCK OSC.	CLK 2.0
15	3HBH	BANK 2	CM 2.0
16			
17			
18	3HBH		
19	3HBH	BANK 3	
20			
21			
22	3HBH		CM 2.0

PANEL B

1	3HBH	BANK 4	CM 2.0
2			
3			
4	3HBH		
5	3HBH	BANK 5	
6			
7			
8	3HBH		
9	3GUH	DATA INTERFACE BITS 32-63	
10			
11			
12	3GUH		
13	3GTH	ADDRESS	
14	3GTH	ADDRESS (SWITCH PANEL)	
15	3HBH	BANK 6	
16			
17			
18	3HBH		
19	3HBH	BANK 7	
20			
21			
22	3HBH		CM 2.0

NOTES:
1. BOARD PLACEMENT FORMAT

TYPE	FUNCTIONAL DESCRIPTION LEVEL 2 REF

Figure A-2-2. CM (BS213-A) Chassis Map

CP AND CM STANDARD ABBREVIATIONS

ABS - Absolute
AC- Address Control
ADRS - Address
ALN - Arithmetic and Logical Network
ALN - Arithmetic and Logical Unit
AOR - Address Out of Range
ARITH - Arithmetic
ASCII - American Standard Code for Information Interchange
ASE - Address Specification Error
ASID - Active Segment Identifier
ASSY - Assembly
AUX - Auxiliary
BCD - Binary Coded Decimal
BD - Branch Delta
BDP - Business Data Processor
BFR - Buffer
BIN - Binary
BKPT - Breakpoint
BN - Byte Number
BOUND - Boundary
BR - Branch
CA - Condition Action
CABR - Cache Address Buffer Register
CAE - Condition Action Extension
CAR - Cache Address Register
CBP - Code Base Pointer
CCR - Clock Condition Register
CHAN - Channel
CLK - Clock
CLR - Clear
CM - Central Memory
CMC - Central Memory Control
CNT - Count
CNTR - Counter
COEF - Coefficient
COM - Common
COMP - Complement
COND - Condition
CONFL - Conflict
CONT - Control
CONV - Convert, Converter
COR - Corrected
CP - Central Processor
CPU - Central Processing Unit
CS - Condition Sensing
CST - Control Store
DAI - Data Interchange
DCDR - Decoder
DEC - Dependent Environment Control, Decimal
DECR - Decrement
DESCR - Descriptor
DESTN - Destination
DISASSY - Disassembly
DIV - Divide
DLYD - Delayed
DSBL - Disable
EBCDIC - Extended Binary Coded Decimal Interchange Code
ECC - Error Correction Code
EMCR - Exit Mode Condition Register
EMMR - Exit Mode Mask Register
ENBL - Enable
ENCDR - Encoder
ESE - Environment Specification Error
EXCH - Exchange
EXCL - Exclusive
EXP - Exponent
EXT - External
FCTN - Function
FF - Flip Flop
FIFO - First In, First Out
FLC - C170 Mode Central Memory Field Length
FNO - Fanout
FRC - Free Running Counter
FU - Functional Unit
GEN - Generator
GENL - General
HLDG - Holding
ICC - Instruction Completion Control
ICP - Instruction Control Pipeline
IDX - Indexed
IF - Instruction Fetch
II - Instruction Issue
IMMED - Immediate
INCR - Increment
INDEF - Indefinite
INF - Infinite
INH - Inhibit
INP - Input
INSTR - Instruction
INT - Internal
INTERSEG - Intersegment
INTFC - Interface
INTRPT - Interrupt
IOU - Input/Output Unit
ISE - Instruction Specification Error
IU - Instruction Unit
K/L - Key/Lock
KYPT - Keypoint
LD - Load
LM - Local Memory
LOS - Loss of Significance
LRU - Least Recently Used
LSD - Least Significant Digit
LSI - Large Scale Integration
LSM - Last Symbol Mask
LWR - Lower
MAC - Maintenance Access Control
MAINT - Maintenance
MAR - Micrand Address Register
MBE - Multiple Bit Error
MC - Master Clear
MCR - Monitor Condition Register
MEM - Memory
MICR - Micrand
MISC - Miscellaneous
MMR - Monitor Mask Register
MOP - Micro-operation
MSB - Most Significant Bit
MSC - Micrand Sequence Control
MSD - Most Significant Digit
MSL - Medium Scale Logic
MSNZB - Most Significant Non-Zero Byte
MULT - Multiply
MUX - Multiplexer
NEG - Negative
NET - Network
NORM - Normalize
ns - Nanosecond
OP - Operand
OPCODE - Operation Code
OPI - Operand Issue
OPN - Operation
OSC - Oscillator
OUT - Output
OVFL - Overflow
P - Program Address
PAR - Parity
PDM - Processor Detected Malfunction
PE - Parity Error
PFA - Page Frame Address
PFS - Processor Fault Status
PH - Phase
PIT - Process Interval Timer
PMF - Performance Monitoring Facility
PN - Page Number
PO - Page Offset
PONR - Point of No Return
POS - Positive
PP - Peripheral Processor
PRED - Predictor
PREV - Previous
PRI - Priority
PRIV - Privilege
PROD - Product
PSM - Page Size Mask
PSWF - Page Table Search Without Find
PTA - Page Table Address
PTL - Page Table Length
PTM - Processor Test Mode
PVA - Process Virtual Address
PW - Partial Write
QUAD - Quadrant
R/W - Read/Write
RAC - C170 Mode Central Memory Reference Address
RAM - Random Access Memory
RCL - Read and Clear Lock
RCVR - Receiver
RDS - Register/Data Select
REF - Reference
REGEN - Regenerator
REL - Relative
REM - Remainder
REQ - Request
RESYNC - Resynchronize, Resynchronizer, Resynchronization
RF - Register File
RGTR - Register
RMA - Real Memory Address
RNI - Read Next Instruction
ROM - Read Only Memory
RSL - Read and Set Lock
SBE - Single Bit Error
SC - Soft Control
SCT - Special Character Table
SECDED - Single Error Correction/Double Error Detection
SEG - Segment
SEL - Select
SEP - Separate
SEQ - Sequence
SIG - Significant
SIT - System Interval Timer
SM - Segment Map
SPEC - Specification
SPID - Segment/Page Identifier
STA - Segment Table Address
STL - Segment Table Length
STR - Stream
SUBTR - Subtract
SUPPR - Suppression
SV - Specification Value
SVA - System Virtual Address
SW - Switch
SYN - Syndrome
SYNC - Synchronize
TERMN - Terminate
TFA - Tag File Address
UCR - User Condition Register
UMR - User Mask Register
UNBR - Unbranch
UNCOND - Unconditional
UNCOR - Uncorrectable
UNDFL- Underflow
UNLOG - Unlogged
UPR - Upper
UTP - Untranslatable Pointer
VMID - Virtual Machine Identifier
WDS - Write Data Select
WOI - Word of Interest
XFER - Transfer
XLTR - Translator
XMTR - Transmitter
ZIF - Zero Insertion Force
ZF - Zero Flag
uBIT - Micrand Bit
uSEC - Microsecond

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